

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

Includes some text in Latin.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE CANADA
EDUCATIONAL MONTHLY
AND SCHOOL MAGAZINE.

MAY, 1886.

SCORES AND TALLIES.

GRANT ALLEN.

MR. FRANK GALTON somewhere tells an amusing story, since profusely copied by all the anthropologists, of how during his South African wanderings he once wanted to buy a couple of sheep from an unsophisticated heathen Damara. Current coin in that part of the world is usually represented, it seems, by cakes of tobacco, and two cakes were the recognized market-price of a sheep in Damara-land at the time of Mr. Galton's memorable visit. So the unsuspecting purchaser chose a couple of wethers from the flock, and, naturally enough, laid down four pieces of tobacco to pay for them before the observant face of the astonished vendor. The Damara eyed the proffered price with suspicious curiosity. What could be the meaning of this singular precipitancy? He carefully took up two pieces, and placed them in front of one of the sheep; then he took up the other two pieces with much wonder, and placed them in turn in front

of the other. Goodness gracious, there must be magic in it! The sum actually came out even. The Damara, for his part, didn't like the look of it. This thing was evidently uncanny. How could the supernaturally clever white man tell beforehand that two and two made four? He felt about it, no doubt, as we ourselves should feel if a great mathematician were suddenly to calculate out for us *a priori* what we were going to have to-day for dinner, and how much exactly we owed the butcher. After gazing at the pat and delusive symmetry of the two sheep and the four cakes of tobacco for a brief breathing space, the puzzled savage, overpowered but not convinced, pushed away the cakes with a gesture of alarm, took back his sheep to the bosom of his flock, and began the whole transaction over again *da capo*. He wasn't going to be cheated out of his two sound wethers by a theoretical white man who managed bargains for live sheep

on such strictly abstract mathematical principles.

Now, to most of us the fact that two and two make four has been so familiar an idea from childhood upward, that we can hardly realize its true abstractness and its immense philosophical and mathematical value. But the poor heathen of Mr. Galton's story knew better: he saw that there was profound reasoning involved in it—reasoning utterly beyond the level of his uncultivated South African intelligence. That two apples and two apples make four apples, that two sheep and two sheep make four sheep, that two men and two men make four men—those are mere matters of individual experience, which any man at any time can settle for himself experimentally upon his own ten fingers. But that two and two make four—that is an abstraction from innumerable instances, containing within itself the root and basis of all subsequent mathematical science. The man who first definitely said to himself, Two and two make four, was a prehistoric Newton, a mute, inglorious, and doubtless very black-skinned but intelligent Laplace.

For just look at the extreme abstractness of the problem laid before the Damara's mind when the over-educated European calmly asked him to accept four cakes of tobacco, all in a lump, as proper payment for two individual sheep, severally valued at two cakes apiece. It is in reality a sum in proportion: "If one sheep is worth two cakes of tobacco, what will be the value of two sheep?" And the Damara had never been to school, or learned from Mr. Barnard Smith's arithmetic the right way to work a rule-of-three sum. It all looks so easy to us because we know the trick already. But how did we come to learn the trick? That is the real question. How did the white European and his ancestors manage to get so far ahead

in counting of the unsophisticated heathen Damara?

I don't know how far the Damaras themselves can count, but the Chiquitos of America, a very low Indian tribe, couldn't count beyond one; for any larger sum than that, their simple language used terms of comparison alone—as many as one's eyes, as many as a crow's toes, as many as the fingers on one hand, and so forth up to six or seven. The Tasmanians could get as far as two: beyond that they stopped short; their simple scheme of numeration was merely this: one, two, a great many. The Australian black-fellows in Queensland go a step further: they reckon thus: "one, two, two-one (3), two-two (4);" and after that they say, "more than two-two," meaning thereby an indefinite number. One South African tribe easily beats this rudimentary record, and knows how to count up to ten. But eleven, or both hands and one over, it regards as the *ne plus ultra* of human computation. When a British detachment once marched against it, the scouts brought in word to the elders of the tribe that an immense army was coming to fight them—"an immense army; eleven white soldiers!"

On the other hand, some savages have really very advanced systems of numeration; for example, the Tongans, whose native numerals go up as far as one hundred thousand. Even this degree of proficiency, however, did not quite satisfy the devouring mathematical passion of Labillardière, who asked them what they called ten times that number, and so on, until he had finally made them give him names for all the subsequent decimal stages up even to one thousand billions. The polite Tongans, anxious to oblige a benevolent and generous scientific gentleman in so unimportant a matter, proceeded at once to supply him with words, which the unsuspect-

ing explorer immediately wrote down, and duly printed as mathematical terms in the accounts of his travels. But, alas for the duplicity and unscrupulousness of savages! the supposed numerals in their higher ranges were really the rudest and naughtiest words in the Tongan language, with which, as missionaries subsequently discovered, the evil-disposed Polynesians had successfully imposed on the bland and child-like innocence of a scientific stranger. Such are the dangers of leading questions addressed in an imperfectly understood tongue to the wicked minds of the children of nature. The children of nature promptly respond in the precise spirit of an East-End Arab.

The basis of all arithmetic, it may be safely asserted, lies in the primitive habit of counting on one's finger's. Not only do all children and all savages so count at the present day, not only do we all learn our first arithmetical lessons on that simple and natural portable abacus, but also all our most advanced numerical methods bear still upon their very face the evident marks of their evolution from the old mode of reckoning on the human hand. For the decimal system itself is a living result of the fact that every man (bar accidents) has ten fingers, and ten only. Nay, the very word "digits," by which we still express in the most abstract manner the symbols of the numbers, points back at last to the ten upheld black fingers of the original savage.

At the very first outset, indeed, the decimal system didn't have things all its own way. It was vigorously and strenuously opposed in the beginning by its vigesimal rival, the system that went in for counting by twenties, or, in other words, by fingers and by toes, not by fingers alone. Primitive man varied in his practice. Sometimes he counted his fingers only, and sometimes he counted his toes as well.

From the one plan springs the system of reckoning by tens, from the other plan that of reckoning by scores or twenties.

Both systems are at bottom, of course, identical. You want to count a great many objects—say, for example's sake, two hundred cocoa nuts. You begin by taking one man, and counting a cocoa nut for each one of his ten fingers; after that, you set him aside. You have reckoned ten, or one man; or, if you like, you put a pebble aside to do duty for him; it stands for ten—a decimal symbol. So you go on, making fingers and cocoa nuts balance one another, till you have got to the end of the whole heap; and you sum up your calculation briefly by saying that the cocoa nuts equal twenty men. To this day, when we write 200 we are keeping up the memory of that very act. Our decimal system marks, as it were, one man, 10; two men, 20; three men, 30; four men, 40; and so on *ad infinitum*. The 0 stands in place of a man; it is the abstract sign of a completed series.

The vigesimal system of reckoning by scores proceeds in just the same manner, only it numbers fingers and toes together, and sets aside one man only when it has counted up to twenty. This, not the decimal system, was probably the original method of all the Northern nations—certainly of all the Celtic peoples—and traces of it still remain in our old English numerals threescore and fourscore, as well as in the habit of reckoning sheep and various other agricultural objects by twenties. In French the two systems still live on amicably side by side. Up to *soixante* the reckoning is decimal; but the old-fashioned *septante* has been completely ousted by *soixante-dix* (threescore and ten), while *octante* and *nonante-trois* give place to pure scoring in the case of *quatrevingt* and *quatrevingt-treize*.

Why did the habit of counting by tens finally get the better in all civilized societies of the still earlier habit of counting by twenties? Simply, I believe, because civilized peoples tend more or less to wear shoes; and shoes obviously interfere with freedom of action in getting at the human toes for purposes of calculation. Bare-footed savages naturally enough reckon by twenties; but booted civilization does its decorous counting by tens alone. Writing and the use of the slate and pencil strengthen the decimal impulse, once set on foot; for you write with your fingers (unless you happen to rival Miss Biffin), not with your toes; and our children nowadays, while they count on their fingers with great unanimity, would probably be shocked and scandalized at the barbaric notion of anything so rude as counting on their feet.

But why is twenty called a score? Only because it represents a whole man, and is therefore scored or marked down on the tally or counting-stick as one person. In its original signification, of course, to score means merely to nick or cut a mark, especially on a short piece of wood. The wood is etymologically much the same as scar; and we still talk (when poetically inclined) of a mountain-side scored by the ceaseless torrents, or of a brow deeply scored by the ravages of time. In these degenerate days, to be sure, the score at cricket is duly entered in a ruled book, together with an analysis

of the bowling, a record of the overs, and a general commentary as to who was bowled, caught, or run out. But I can myself remember, in a very remote neighbourhood, when I was a boy, seeing the score kept in the true primitive fashion by another boy seated on a fence, who cut a notch with his knife for every run on one of two sticks, green-barked and brown-barked, each representing one of the two sides.

A sort of sanctity was attached to the proceeding—the sanctity that results from ancient usage. For that was the sort of swing that gave the score its present name: it was a real survival from an antique savagery. Just so the primitive arithmetician, while yet the whole world was young, counted up to twenty on a man's fingers and toes, and then made a notch on a stick to denote "one man up," or, in other words, twenty. It was a safer and easier way of reckoning than counting by men alone; because, in the first place, one man (for example, the reckoner himself) would serve as a numerator over and over again; and, in the second place, the score once marked on a stick remains forever, while the men are apt to get up and walk away, which is as disconcerting to the ardent arithmetician as the action of the hedgehogs in Alice's croquet to the enthusiastic player.—*Lippincott's Monthly.*

(To be continued.)

THE EXAMINATION MACHINE.—It is possible to provide machinery on a great scale, and yet to accomplish little. In the last century it was remarked how little good came of the rich endowments of our universities, and how they were surpassed by much poorer universities in other countries. Machinery thrown away! In this century we have tried machinery of a different kind. Have we always had success? We set up the examination system; we extended it over

the whole country; and what do we think of the result? Is this machine so decidedly better than the other? I think few persons will say so. Emulation turns out to be a rude and coarse motive; competition proves to be an exhausting, unhealthy process. It is complained that those who have been trained under this system imbibe low views of culture; that this sort of education has disappointed results and can scarcely be called liberal.—*J. R. Seely, in Nineteenth Century.*

EDUCATION IN POLITICS.

(STATE OF NEW YORK.)

ONE would think that an intelligent and independent community would be somewhat scrupulous about parting with the control of its children in the matter of instruction, and would prefer to attend to that matter themselves, rather than to be much superintended by any distant office-holder who happens to be thrust into the position where he can regulate the schools of the State. But the Superintendent of Public Instruction is the head engineer of that vast political machine which has come to supersede all private agency in the formation of the minds and characters of the young so far as it is possible for schools to do it. We say "political machine," because the great work of carrying on primary education in this country is being steadily and rapidly swallowed up in the gulf of politics. Indeed, the fundamental reasons given for the existence of our common school system, and avowedly the sole reasons for which it can be maintained, are political. It is freely admitted that the State has no other warrant for taking in hand the instruction of the young than to shape them as citizens in accordance with the political system we have adopted. As a consequence, the business of administering education is becoming a prominent part of politics, and appointments in all the best-paid positions are being more and more determined by the common influences of political manipulation and intrigue. The influence of this state of things upon teachers, who are now all government office-holders, is a chapter of the subject that cannot be here dealt with, but is full of interest. Our object is now simply to call atten-

tion to a conspicuous illustration of the control of partisan politics over our whole system of State instruction.

No intelligent person will deny that the general subject of education is one of great complexity and great difficulty, and that to control it wisely and improve its practical methods is a task requiring much ability, long and profound devotion to its fundamental questions, and a wide and varied experience in educational work. But very few men can be found combining the rare qualifications needed in a State Superintendent of Education; at the very best these qualifications can only be secured in a partial degree, but this makes it all the more necessary that no effort shall be spared to secure the best talent available for so responsible a trust. It is needless to say that this desirable object is impossible under the political *régime* into which our popular education has now passed. The superintendency of schools of the State of New York has become a foot-ball of partisan faction among the politicians of the New York Legislature. The former Superintendent resigned some weeks ago, to take a more profitable office; and the temporary incumbent of the place will vacate the office in April, to be succeeded by whomsoever the Legislature appoints. A crowd of applicants of all sorts are after the place, lobbying and intriguing in Albany by all the means that are necessary to secure "success" in the scramble for a desirable position. That a competent man will be appointed under these circumstances is virtually impossible, for no thoroughly competent and self-respecting man would enter

the lists of competition under these circumstances. The appointee will win because he or his friends can beat all competition in the questionable arts by which politicians are influenced, and the result will be legitimate—a natural outcome of the system by which the instruction of the young has been brought under political and therefore, of course, under partisan control.

Another exemplification of the influence of politics upon education is seen in the "Blair Bill," which proposes that Congress shall make a gift of seventy-seven million dollars, to be divided among the States of the Union to help them maintain their schools. The success of the bill, as we write, is said to be uncertain; but, whether it pass or not, it has had so extensive a backing as to well illustrate the sort of influence which politicians would bring to bear upon education. The tendency to make education a charity, and to bring schoolhouses into the same category with poorhouses, is sufficiently strong; but this measure, by an audacious stretch of constitutional power, would give the stamp of nationality to the charity policy. The scheme proceeds upon the peculiarly American assumption that anything can be done with money, and that the Central Government has or 'y to scatter millions enough and all the people will be educated. But

the assumption is false: there are things which no amount of money can do, while the evils of its lavish distribution are not only palpable and certain, but may result in the absolute defeat of the object intended. That the distribution of this seventy-seven million largely among the States would be profoundly injurious to the interests of popular education does not admit of a doubt; and the American Congress would have to make the experiment but *once more* to paralyze and destroy the existing common-school system of the country. For, by the results of all experience and the very necessity of things, those who expect to be helped will depend upon help, and put forth less effort to help themselves. Whatever lessens the interest taken by parents and citizens in the working and character of the schools, whatever tends to diminish their direct responsibility in regard to them, and to weaken the sense of obligation to make sacrifices for the instruction of the young, strikes a demoralizing and deadly blow at the springs and incentives of all educational improvement. Our people have yet to learn that one of the highest benefits of a popular educational system is in training parents and citizens to the efficient discharge of their social duties, and a national policy which undermines these obligations cannot be too strongly reprobated.—*Popular Science Monthly.*

MISSIONARIES IN THE HEART OF AFRICA.

IT was the missionary who was the first discoverer and explorer. Livingstone, thirty years ago, cried aloud for lawful trade to come in and exclude that trade which tramples roughshod over all law, human and divine, and for teachers to impart to the degraded millions the higher freedom which Christ has provided for

mankind. The Universities' Mission was first on the field; Livingstone guided the good Bishop Mackenzie into the Shire Highlands in 1861. Mackenzie's grave, at the junction of the Rua and the Shire, is tended lovingly by the natives; and the mission, which has its base at Zanzibar, is now returning to the eastern

shore of Nyassa with the *Charles Fanson*. The churches in Scotland responded to the call from Ilala and Westminster by the founding of 'he Livingstone Mission (Free Church), with stations along the western shores of Nyassa, and the Blantyre Mission (Church of Scotland) above the Murchison Rapids. Both of these are well-manned and vigorous, and the fruits of nine or ten years' labour are beginning to appear. The steamer *Ilala* does great service on the waters of the lake. When Stanley's notable letter from Uganda was published, in the end of 1875, telling about King Mtesa, the Church Missionary Society promptly sent labourers to the Victoria Nyanza; to-day the effort there is fully sustained and prosperous.

About the same time (1876-77) the London Missionary Society entered on both sides of Lake Tanganyika, and the steamer *Good News* will be afloat there before these lines are read. Away on the western side of the new territory the Baptist Mis-

sionary Society and the Livingstone Island Mission (transferred to the American Baptist Union in October last) have been busy since 1879, working with strong devotion and persevering courage. For some time a steamer has been plying on that part of the Congo (120 miles), which is navigable seaward, and there are two more—the *Peace* and the *Henry Reed*—in full work on the magnificent reach of 1,000 miles from Stanley Pool up to the falls. The New Testament was translated into Twahili by the late Bishop Tteer, and has now been translated into Chinyanga by Dr. Laws, of Livingstonia, the Synoptic Gospels into the tongue of Mganda by Mr. O'Flaherty, while considerable progress in the same satisfactory direction has been made by Mr. Holman Bentley and his Baptist comrades on the Congo, and by the missionaries at Blantyre. Thus, while the last ten years have done great things, the remaining years of the century promise to do more.—*Good Words*.

SCHOOL SAVINGS BANKS IN FRANCE.

FROM a recent report of the French Minister of Public Instruction we see that in January last 23,222 schools had a school savings bank, and that 488,624 schoolboys were depositors in these banks, and possessed there at that date the sum total of 11,285,046f.

These results are very remarkable. The institution was founded by M. de Malarce in 1875, and in no case has any official pressure been used. The whole scheme was originated by a single person, and has been carried to a successful issue by the professional devotion (quite voluntary) of

the local authorities and schoolmasters.

The official report of 1880 stated:—"The first school savings bank was established in 1834 by M. Dulac in the municipal school of the city of Le Mans. It was carried on till 1870. In some localities, as for example, Amiens, Périgueux, Grenoble, Lyons, Paris, and Chatenay, some efforts of the same kind were made, but they were not so lasting. According to the inquiry ordered in 1879 by the Minister of Public Instruction, only seven school savings banks existed in 1873, situated in the departments of

Yonne, Ardèche, Nord, Seine et Oise, Pas de Calais, and Calvados. M. de Malarce, who was instructed in 1873 by the Minister to inquire during the Universal Exhibition of Vienna into the whole question of savings banks, had given his attention to establishments of that character, which had been tried in various countries. Other inquiries which had been intrusted to him by the Ministers of Finance and of Agriculture and Commerce had given him opportunities of comparing the economy of other nations with that of France, and he now set to work to draw up the best rules for organization and operation of the school savings banks, and to promote their establishment in France. . . . The central administration had shown much interest in these banks; but it had been careful not to interfere by the issue of any direct orders for fear of altering the character of an institution requiring very delicate treatment, like all institutions which had moral education for their object. It was necessary, as a first condition of efficiency, that the school-master should open the savings bank, and

schoolboys should deposit their money in it entirely of their own accord, without any other influence than that of good example."

The official report of the 19th of June, 1884, on the same subject also emphasized the fact that the administration of Public Instruction, while showing deep interest in the matter, left the initiative to the schoolmasters, who, according to the report, "act only from professional devotion, without any selfish object. Usually, however, they receive in most deserving cases, a special medal, awarded by the municipal council of the locality, or by the council-general of the department. The schoolboys deposit freely. The 488,624 depositors of the 23,222 school savings banks represented about a third of the pupils. The depositors are naturally the elder lads. The average sum deposited by each boy is 15 centimes a week. This is the saving that a boy makes from his pocket-money. Thus the school not only teaches the boy to work, but it initiates him also in the principles of economy and arms his moral energies for the struggle of life."

COLLEGE DISCIPLINE.

HEALDSBURG COLLEGE has a good reputation wherever its influence is known and felt, and we can justly attribute no small part of the credit to our excellent rules and regulations. We would not underestimate the influence our thorough methods and industrial labour have contributed to the general success of our college; but its excellent government has been the students' safeguard while exposed to the various temptations of college life, and it has, moreover, added dignity and solidity to their characters. With the sterling

morality by which our fathers regarded character, this feature of our work would be more highly appreciated than simply the mental discipline acquired in our college to the neglect of the morals.

Why colleges and schools should not legislate as wisely concerning character as concerning mind may not be easily explained, but every observer of popular college life very well knows that our most popular schools give but little attention to the morality of their students. The only positive requirements of

the students being that they attend recitations, have their lessons, and pass the usual examinations. But little notice, if any, is usually given to the debauchery of the student, unless it interferes with one of the above requirements.

Indeed the absence of government in Michigan University was so notorious that some wag was tempted to say that the University had but two rules: (1) No student shall set on fire any of the college buildings; (2) Under no circumstances shall any student kill a member of the faculty.

Notwithstanding the world-wide reputation of members of faculties, the fine *mental* discipline of students, and the boasted high tone of university life, yet beneath all this show of strength, there exists a deadly influence in the atmosphere that undermines character and blasts the pros-

pects of hundreds of our talented young men. As a consequence the nation is perishing to-day for lack of true morality in the men who furnish the brains to carry forward its machinery. Notwithstanding the general laxity that exists in family and school government, yet there still remains in the hearts of parents a warm regard for a system of rigid rules and regulations to govern their sons and daughters at school. Among the subjects of discipline with which our College has dealt, there is a class that is irreclaimable, and totally incapable of being corrected. Such, as a rule, are either expelled, or anticipating such action of the faculty, they retire of their own accord. They invariably refer to the school, whenever opportunity presents itself, in unkind criticism or base slander.—*College Papers, U.S.*

PRINCE ALBERT VICTOR.

PRINCE ALBERT VICTOR Christian Edward, the eldest son and the heir of the Prince of Wales, completed his twenty-first year on the 8th of January. He is the oldest of a flourishing family of five royal children, having a brother, Prince George, now in his twentieth year, and three sisters, the youngest of whom is fifteen.

With the advent of this prince to his majority, a new generation of royalties may be said to have come upon the stage in England. The Prince of Wales' children will now take their places in public life. The sons will probably sit in the House of Peers and wear ducal titles—for even Princes are not members of the House of Lords by right until they are formally created peers; while we may expect ere long to hear of marri-

ages being arranged for the Prince's just-budding daughters.

The young Prince derived his names from his grandfather, Prince Albert, his grandmother, Queen Victoria, his other grandfather, King Christian of Denmark, and his father, Albert Edward. He has heretofore been known as Prince Albert Victor, but his name in the family is Edward, and the newspapers are beginning to call him Prince Edward. It is supposed, however, that he will take his place in the peerage as the Duke of Kent. That was the title of his great-grandfather, who was Queen Victoria's father and the brother of George IV., and it is said to be the intention to revive the dignity for the benefit of the Prince. If this should be done, he will always be spoken of in the newspapers as the Duke of Kent,

until the death of his grandmother or his father, or of both, makes him Prince of Wales or King.

The world has as yet heard but little of Prince Albert Victor. It is mainly because he will in due time, if he lives, and if monarchy is maintained in England, ascend the throne, that his coming of age is a matter of general interest.

He is described as a comely young man, resembling his father in personal appearance and in the amiable good-nature of his character; but he has as yet given no signs of unusual ability or talents. At least, the young Prince, who may one day wear the crown of the conqueror, has seen a good deal of the world. After completing his university education, he was sent on a long voyage with his brother, Prince George, almost or quite around the world, in a British naval vessel; and in the course of this trip he saw many lands and curious peoples.

The outlook before Albert Victor is fair and full of pleasant prospects. No doubt a large annual allowance will be made to him from the public purse. He will have an "establishment" befitting his rank as a probable future king. He will sit among the peers, the highest in rank of them all, his father only excepted; and probably a brilliant marriage with some fair continental princess will be arranged for him in a year or two.

Yet the future of the young Prince is not altogether unclouded. A strong and growing democratic tendency exists in England. Already there is a clamour for the disestablishment of the State Church, and another for the abolition of the House of Peers. The democratic leaders become bolder, more outspoken, more popular and powerful every day. It may be, therefore, that before Albert Victor ascends the throne, an attack may be made on the monarchy itself. It is not impossible that, some years hence, a movement to replace it by a republic may become formidable, and that it may even prevail.

Queen Victoria bids fair to reign as long as her grandfather, George III., who occupied the throne for sixty years; and it is, of course, not impossible that she may outlive the Prince of Wales. In this case, she would be succeeded by Albert Victor. There is only one instance, however, in recent English history in which a Prince of Wales had died before the reigning king, and that the grandfather has been succeeded by his grandson; and that was in the case of George III., who succeeded his grandfather, George II. The career of Albert Victor will be watched with interest; not that he has developed any interesting traits in his own character as yet, but because of the high destiny to which he has been born.

FORMATION OF CHARACTER.

CHARACTER is defined by Dr. Wayland to be the present intellectual, social and moral condition of an individual. It comprehends his actual acquisitions, his capacities, his habits, his tendencies, his moral feelings, and everything which enters into a man's state for the present, or his powers for attaining to a better

state in the future. It is the source of all that he either suffers or enjoys here, and of all that he either fears or hopes for the future. Character is a structure that every individual is building, and every thought, every word, and every deed go to make up the material that compose this structure. The foundation upon which

this building is reared determines our security for this life and for that which is to come.

In view of the great and eternal issues involved in the formation of character there is no subject of more vital importance, nor one that urges its claim more upon the consideration of the young. Were the youth of our land but more generally convinced of the importance and necessity of a good character and possessed with a proper regard for it; did they but know the way to its attainment and with a just sense of its excellence, bring everything at their command into requisition to acquire it, we should observe a marked improvement in the state of society.

In order to the formation of a good character, it is necessary that we possess a deep sense of the vast importance of such a character, and the rich and inestimable advantages resulting from such a noble acquisition; for in proportion to the value in which anything is estimated, will be

a corresponding effort to its acquisition. It is well to take a retrospect of our past life, enter into an unbiassed and impartial judgment upon our past actions, and review the instances of our failings and imperfections, and reflect upon the unhappiness we might have avoided had we taken pains to have corrected our faults. This will awaken within us a sense of duty, and prompt us to the work of improving every opportunity and occasion to attain to excellence of character. But, above all, the moulding influence of the Divine Spirit must be sought, and the ennobling energies of God's grace must be called into requisition in order to the formation of a noble and symmetrical character.

The formation of character is a life work, and upon this work depends our future weal or woe, as the happiness of heaven or the misery of perdition is determined by the characters we form during our short term of probation on earth—*Rev. J. A. Smith.*

SCRIPTURE LESSONS FOR SCHOOL AND HOME.

NOTES FOR TEACHERS.

No. 5. MOSES.

Exodus ii.

I. **THE CHILD PERSECUTED.**
(Read 1-3.) Birth of a babe always a time of interest. Who were the parents of this one? Amram and Jochebed (see vi. 20), of tribe of Levi. Lived in troublous times. Who was king of Egypt? Pharaoh afraid that Israelites would grow too powerful—perhaps drive him from throne—so determines to stop their increase. What cruel command did he give? (i. 22.) What thrill of dismay would go through each mother of a baby

boy! What sort of a child was Moses? Goodly means a specially beautiful and fine child (see Acts vii. 20, margin, "fair to God"). What *can* she do to save it? Hides it at home for three months; but the search for baby boys so incessant she must find a safer place. How many discussions there would be! At last determines to place it in tall bulrushes by side of river. Soldiers will surely not think of looking *there*. So cradle made—pitched water-tight—the baby put in—last kiss given—and left by bank of river. How full mother's heart would be—how many prayers would ascend for the child!

II. THE CHILD SAVED. (Read 4-10.) Who is this little girl left to watch? It is Miriam—the child's elder sister—not many years older. How often had she played with and nursed her baby brother! How glad she would be to do something for him! Now question on the story—Pharaoh's daughter coming to bathe—seeing the cradle—sending her maid—the child's cries—the woman's heart of the princess moved with pity. What can she do for it? Now Miriam comes forward. What does she say? What a sensible girl! She sees the impression made on the princess, and takes advantage of it. So she fetches Jochebed, who thus becomes the hired nurse of her own baby. How wonderfully God has heard her prayers? The babe is to be brought up in the king's palace safe from all danger. He is called Moses, because drawn out of the water.

III. MOSES EDUCATED. (Read Acts vii. 22; Heb. xi. 24-26.) The princess did not adopt him and neglect him. Gave him good education. Probably gave him tutors; but also evidently taught his own religion. Whom did Pharaoh worship? Bulls, and other animals, the river Nile, etc. When Moses was grown up, what choice did he make? Could not stay where God not worshipped. So gave up luxuries, comfort, etc., of palace, chose rather to be a slave amongst his own people.

LESSONS. (1) *God orders all things well.* His persecution proved blessing—gave him good education—fitted him for future life as leader of Israelites. (2) *Make good use of opportunities.* He profited by his education. Became learned and useful. (3) *Decision for God.* Such a choice sooner or later comes to all—God or the world. What shall our choice be?

TEXT. *We will serve the Lord.*

No. 6. SAMSON.

Judges xiii.

I. THE CHILD PROMISED. (Read 1-7.) A story of the time of the Judges. Joshua dead, and the elders who outlived him. Israelites settled in Canaan, each family living on its own farm. But in time of prosperity fell away from God, learned idolatry from nations around them; were punished by being oppressed by enemies; amongst these Philistines most hostile. Lived in south of Palestine—subdued Israel forty years. Who should deliver them? Manoah and his wife no child. Who comes to her? What is his message? (Angel means messenger.) Children are God's gift (Ps. cxxvii. 3), and this child is to be specially given to God's service. What is he to be? (Word Nazarite means "separate.") Some took these vows for a time, and some for life. Samson's vow was to be the latter—whole life to be devoted to God's service. *What was he not to do?* Cut his hair, drink strong drink, touch anything unclean. (See Num. vi. 3-6.) Long hair would be an outward sign to all—abstaining from strong drink would keep him sober. *What was he to do?* Fight against God's enemies—set example of holy life—lead people of Israel.

LESSON. All children of godly parents dedicated in similar way. By solemn prayers of parent—by training in temperance and soberness. What must they keep from? Excess in eating and drinking, amusement, etc., also from all evil works, called dead works (Eph. ii. 1; Col. ii. 8); are called to be holy. (Rom. i. 7.)

II. THE CHILD BORN. (Read xiii 24; xiv. 7.) In course of time the child born. Receives name, Samson, meaning "strength." What strength did he receive? *Bodily.* Have read

story of killing the lion—did many other wonderful things—killing thirty men (xiv. 19)—carrying off the gates of Gaza, etc. *Mental.* Powers of his mind developed—put riddles, etc.—was evidently looked up to as a leader. *Spiritual.* By whose power was he able to do these wonderful things? (See xiii. 25 ; xiv. 6.) God's Spirit gives strength to body as well as soul. (1 Cor. vi. 19.) Samson seems to have increased year by year in bodily strength—do not hear of his increasing in holiness. Afterwards fell into sin and was punished. Still he—child of many prayers—was for

many years under direct influence of God's Holy Spirit.

LESSONS. (1) *Blessing of early dedication.* How blessed to give a whole life to service of God—to fear and love Him at home—at school—in the world. Is a Master worth serving? (2) *Need of growth.* Nothing can live without growth. No growth shows decay. Must cultivate bodily, mental, spiritual growth. Same Spirit ready to be given to us. Promised to all who seek Him. (Luke xi. 13.) Then may serve God, and have His blessing all our lives.

TEXT. *Grow in Grace.*

LEGAL.

In re The Minister of Education, and McIntyre v. Public School Trustees of Section Eight in the Township of Blanchard et al.

THIS was an appeal by the Minister of Education against a judgment of Lizars, Judge of the County Court of the county of Perth.

The decision was given in a case in the Third Division Court in the county of Perth, wherein Wesley McIntyre, by William John McIntyre, by his next friend, was plaintiff, and the Public School Trustees of Section 8 in the township of Blanchard, in the county of Perth, and Lizzie Irvine, were defendants. The subject of complaint was the wrongful dismissal of the plaintiff from the school in question.

It was proved before the learned Judge that the teacher, Miss Irvine, had dismissed the plaintiff, a boy thirteen years of age, from the school "for disobedience in the first place; speaking to me impudently when questioned about it, and lastly, refusing to be punished for miscon-

duct." This was on 3rd December, 1884. This notice was received by his father. A meeting of the trustees was held on the 6th January, 1885, and a notice was sent to the father as follows: "Wesley is at liberty to come back to school when he expresses his regret to the teacher for his misconduct; until then he will not be admitted." This was signed by two of the trustees.

At the conclusion of the case the learned Judge held that the action was maintainable by the boy; sec. 102, sub-sec. 19, giving him right to attend; that he was suspended by the teacher properly; that the complaint was adjudicated on in said resolution of the 6th January, 1885; and the refusal to admit after this was wrongful; that the terms imposed, being beyond the power of the trustees, should dismiss the boy; that the damages were not much if the boy's and the father's conduct were looked at; that 50 cents were sufficient damages as to the trustees; and that the action must be dismissed as to the teacher.

GALT, J.—In my opinion, the conduct of the trustees was quite correct. It would be impossible to carry on a public school, particularly when it is under the control of a mistress, if a boy was entitled, as a matter of right, to receive instruction notwithstanding misconduct towards his teacher, without making an apology when the trustees find that he has misconducted himself.

CAMERON, C.J.—I also am of opinion this appeal must be allowed. The action of the trustees in modifying their judgment in the absence and without notice to the parties interested was an irregular proceeding, but it is quite manifest from the evidence before the Court they were actuated only by a desire to do their duty properly, and the slip made was one that men in their position, unaware of the requirements of the law, might very readily make. The condition requiring the boy to apologize to the teacher was a reasonable one, and if it had been determined upon at the first meeting I think no objection could be urged against it.

The plaintiff, in my opinion, acted most unreasonably in the course he took. If capable of understanding what was in his boy's own interest he ought to have insisted upon his making the apology. There is no humiliation in doing right, and in acknowledging an error there can be none. The error itself is the cause for feeling humiliated, not the acknowledgment, which, if frankly and sincerely made, goes far to atone for the fault. Courts, however, have to deal with the legal rights of parties, not with their tastes; and if the plaintiff made out that a legal right to which he was entitled had been invaded, he would

not be denied the legal redress pertaining to the wrong, no matter how objectionably he may have conducted himself.

The learned Judge in the Division Court dismissed the action against the school teacher, and it was her action, not that of the trustees, that removed the plaintiff's son from school. The passing by the trustees of a resolution that he should be allowed to return if he apologized was not an expulsion. The boy, after the passing of the resolution, returned to the school, and remained there for several days without being interfered with, but the teacher would not give him any instruction.

It did not appear that in not instructing the boy she was acting under the direction of the trustees, and they would not be liable to an action for not compelling the teacher to give instruction.

I have very grave doubt as to the school trustees being liable to an action for an error such as committed in this case without its being alleged and shown that the act was malicious, unless followed by some act that would amount to an assault or trespass.

The proper way to obtain redress, if the action of trustees is illegal in denying the right of attendance at school it seems to me is by mandamus and not by action. It is not necessary to decide that in the present case, as I think the plaintiff fails on the facts, and so I do not rest my opinion on that ground. I should require to give more consideration to the question than I have done before expressing a positive opinion upon the point.

ROSE, J., concurred.
Appeal allowed.

SCIENCE AND MODERN DISCOVERY.

THE present occupant of Sir Isaac Newton's professorial chair at Cambridge University, Professor G. G. Stokes, F.R.S., who is also Secretary of the Royal Society of England, delivered a remarkable address at the Annual Meeting of the Victoria Institute, in London, toward the end of June. Sir H. Barkly, G.C.M.G., F.R.S., occupied the chair, and the audience, which included many members of both Houses of Parliament, filled every part of the large hall. Professor Stokes gave an important account of the progress of physical science during the past quarter of a century, and, reviewing the results, specially noted that as scientific truth developed, so had men to give up the idea that there was any opposition between the Book of Nature and the Book of Revelation. He said that for the last twenty years or so one of the most striking advances in science had been made in the application of the spectroscope, and in the information obtained with regard to the constitution of the heavenly bodies. The discovery that there were in these particular chemical elements, which were also present in our earth, exalted our idea of the universality of the laws of Nature, and there was nothing in that contrary to what he had learned in Revelation, unless we were to say, as the heathen did, that the God of the Hebrews was the God of the hills and not of the valleys. Entering with some particularity into the composition of the sun, the Professor said this gave an idea of an enormous temperature, since iron existed there in a state of vapour. This was utterly inconsistent with the possibility of the existence there of living beings at all approaching in character to those we

have here. Are we then to regard this as a waste of materials? Might we not rather argue that, as in animals, we ascend by greater specialization, so we could consider the differentiation of office in different members of the solar system as marks of superiority, and could regard the sun as performing most important functions for that system? In fact, all life on our earth was ultimately derived from the radiation of solar heat. Referring to the doctrines of conservation of energy, and of dissipation of energy, he pointed out at some length how the sun, so far as we could see, was not calculated for an eternal duration in the same state and performing the same functions as now. We must regard the Universe on a grand scale, and then there was progress. If we contemplated nothing but periodicity, perhaps we might rest content and things would go on forever as at present; but, looking on the state of the Universe on a grand scale as one of progress, this idea obliged us to refer to a First Cause. Professor Stokes concluded with recommending that the Annual Report of the Society, read by Captain Frank Petrie, the honorary secretary, be adopted. It showed that the number of home, American, and colonial members had increased to upwards of eleven hundred, and that the Institute's object, in which scientific men, whether in its ranks or not, aided, was to promote scientific inquiry, and especially in cases where questions of science were held by those who advanced them to be subversive of religion. All its members and one-guinea associates received its transactions free, and twelve of its papers were now published in a People's Edition, which was to

be had in many of the colonies and America. The address was delivered by Dr. J. Leslie Porter, President of Queen's College, Belfast, the subject being "Egypt: Historical and Geographical," a country with which he had been thirty years intimately acquainted. Having referred to the antiquity of Egyptian records, which in so many instances bore on the history of other ancient countries, he proceeded to describe the various changes through which that country had passed since its first colonization; and, touching on its physical geography, concluded by giving the main results of recent exploration. One or two special statements may be here recorded. Dr. Porter said: "Were the Nile, by some convulsion of Nature, or by some gigantic work of engineering skill—neither of which is impossible—turned out of its present channel away up to Khar-toum, or at any other point above Wady Halfa, Egypt would speedily become a desert." No tributary enters the Nile below Berber, that is to say, for the last thousand miles of its

course. "The arable land of Egypt is about equal in extent to Yorkshire." The White Nile, issuing from Lakes Albert and Victoria Nyanza, is broad and deep, never rises above a few feet, and supplies the permanent source of the river of Egypt. "The other tributaries produce the inundation." Of these the Atbara, from the mountains of Abyssinia, is the most fertilizing, as it brings down with it a quantity of soil. The deposit of this soil is slowly raising the bed of the river, as well as extending on each side; for example, on the plain of Thebes the soil formed by deposits has, in 3,500 years encroached upon the desert a third of a mile, "while the ruins of Hierapolis in the Delta, which once stood above reach of the inundation, are now buried in a mud deposit to a depth of nearly seven feet." In conclusion he referred to Egypt and its present condition, saying: "The commerce from the upper tributaries of the Nile, and from the wide region of the Soudan, forms an essential factor in the prosperity and progress of Egypt."—*Christian Guardian.*

NOTES FOR TEACHERS.

It is the spirit of the age to count sin as a mere peccadillo: whereas it cuts off at one stroke all hope or trust in God, all love for Him, and every pleasing thought of Him. To count it a little thing, to laugh at it, to jest about it, to find pleasure in reading or hearing representations of it, is criminal thoughtlessness in the young and desperate wickedness in the old. The spirit of making light of sin is infectious. Those who do so, whether in the bitterness of the cynic, the impotent folly of the worn-out debauchee, the buffoonery of the clown, or the frivolity of the precocious young man,

poison their own souls, and should be avoided like the pestilence. — "Queries," *Buffalo, N. Y.*

THE art of conversation is one of the most valuable qualifications for the teacher. Children are delighted with one who has the ability to talk with them in a sensible and entertaining manner. It is admitted that the art of conversation can be taught as a branch of school-work, and by the guidance of certain general rules the teacher can exert an influence, by her style and example, that will be of great value to the young in securing

for them felicity of expression and ease of manner. Children always listen to a good narrative with delight, and to listen well is almost as desirable as to talk well. Conversation is a mutual matter, and in real life "small talk" is the basis of a large proportion of social intercourse. Talks with children should be varied, natural, free in style, governed always by the rules of good breeding, such as avoiding interruptions, personal insinuations, indelicate allusions, or double meanings, cheap witticisms, etc. The great secret of a successful talker consists in displaying genius in bringing out the thoughts of others. Children analyze and philosophize with great correctness; and the teacher who talks too much or who aims to show her own superiority will soon lose her power to interest or instruct the young. It requires wisdom to talk well, and sound judgment must be exercised when to keep silence.—*Ex.*

THE VALUE OF THE CONGO.—A letter from Mr. Stanley, protesting against giving up the control of the Congo to the Portuguese, which was read in the Geographical Section of the British Association, gives a magnificent idea of the value of what that river is capable of contributing to the advance of civilization. "Despite every prognostication to the contrary," says Mr. Stanley, "this river will yet redeem the lost continent. By itself it forms a sufficient prospect; but, when you consider its magnificent tributaries which flow on each side, giving access to civilization to what seemed hopelessly impenetrable a few years ago, the reality of the general utility and benefit to these dark tribes fills the sense with admiration. Every step I take increases my enthusiasm for my work, and confirms my first

impressions. Give 1,000 miles to the main channel, 300 to the Kwango, 120 to Lake Matenba, 300 to the Mobimbu, probably 800 to the Kaissai, 300 to the Saukuru, 500 to the Aruwimi, and 1,000 more to undiscovered degrees, for there is abundant space to concede so much, and you have 4,520 miles of navigable water."

MORE ABOUT THE EFFECTS OF TOBACCO.—Dr. Hobart Amory Hare, of the University of Pennsylvania, after an elaborate dissertation on "The Physiological and Pathological Properties of Tobacco," expresses the conclusions that "tobacco does no harm when used in moderation—to the man who, by occupation, leads an outdoor life, or one in which much physical exercise is taken, but rather does good, by quieting any tendency to continued action which may exist; to those who, by exceptionally long use, have become inured to the effects of the drug, and whose systems depend upon it; or to those whose temperaments are naturally phlegmatic and easy-going. Tobacco does harm to the young and not yet full-grown; to the man of sedentary habits; to the nervous and those whose temperaments are easily excited; and to the sickly and those who, by idiosyncrasy, are strongly affected by the drug." The different methods of using tobacco are harmful in the following order: Chewing, cigarette smoking, cigar smoking, pipe smoking, Turkish-pipe smoking. The quality of the drug governs the degree of its harmfulness more stringently in some cases than in others, as do also the character and constituents of the paper in which cigarettes are wrapped. Finally, the oft-repeated words "excess" and "moderation" "form the key-stones of the arches which the writers on tobacco, *pro* and *con.*, have raised."

CORRESPONDENCE.

GUILT WITH GOLD.

Editor, EDUCATIONAL MONTHLY :

SIR,—I can assure you that nothing but a sense of duty compels me to address you at this time, for I learn by correspondence with students now in attendance at the Normal School, Toronto, that things are no better, but rather worse than they were at the corresponding session of 1884. During that session I am safe in saying that copying at examinations of all sorts was practised by at least one-third of the students last session ; if I may judge from reports it was worse still, and my informant tells me that it is as bad as ever just now.

During the first half of 1884 the cribbing system was so shameless that some of the lady-students held an indignation meeting, and sent a remonstrance to the Principal, who, so far as we could see, paid no heed to it. You may understand how galling it was to those who worked honestly to see others getting an unfair advantage. Friends and acquaintances of mine who were there last session declare that they never saw anything so barefaced in their lives—books and papers were openly used by all the gentlemen (?) with few exceptions, and by a large number of the ladies (?). The strife seems to have been about the gold medal to some extent, but was also for general purposes ; and the person to whom the medal was awarded by the judgment (!) of the teachers—alas ! for the judgment—was known by every student to have stolen his way clear through the term. I believe he did not get the bauble, because some jealous comrade informed on him, but from what is common talk he did not even deserve

a certificate, and if strict justice had been meted out, neither would ninety per cent. of the remainder.

As far as this session is concerned, the following speaks for itself :—

“My Dear ———, yesterday we had such a time. Of course you know how copying is carried on here ; well it had been going on as usual at the examination in music, and somebody must have told, for the Principal, looking, oh ! so very deeply grieved, told us he would have to cancel that examination. Then, what do you think? Didn't one of the gentlemen get up and tell the Principal that if he was going to cancel that examination because copying had been going on, he might as well cancel all the other examinations of the session for the same reason. It was just too bad for anything, but it serves some of them right for the way they went on ; so the Principal said he was so sorry ; that this sort of thing had never happened before ; that only one student had copied once all last session, and that for that he missed the gold medal. So all our work has to be done over again.”

I am perfectly unable to understand how this dishonesty has been permitted — I sometimes thought, winked at—for such a long time. I am quite sure that even I could prevent it if I had charge of the class, but then I would have to be active, and on the alert. I could not do much if I kept my seat, or remained at one end of the room all the time.

Is it not, Mr. Editor, truly pitiful to think that so much looseness of management and of principle prevails at our chief teachers' college? And is it not sad to know that so many dishonest men and women are licens-

ed to take charge of the innocent children in our fair Province? I think it is.

It is a very general opinion among ex-students that the school is in need of re-organization. In the Model School, also, there is room for improvement. But if I proceed at this rate you will think me a constitutional grumbler, although, Sir, I can assure you, "the half has not been told." Don't I only wish I could have the ear of the Minister of Education for two or three hours?

By inserting this you will confer a great favour on many, and on none more than on your humble servant,

RACHEL.

[We give insertion to this letter because the substance of it has come to us from various sources. On making enquiry we learn that the candidate, who apparently was entitled at the end of last session to the gold medal, did not get it on account of improper conduct during the examination, but he obtained his certificate. This was done by the Minister of Education. Many will say that the Minister committed a bad blunder; for any candidate who forfeited his claim to a medal by dishonest practices, *a fortiori*, lost all right to a certificate entitling him to take charge of a school. With respect to the second charge made in the letter, viz., "copying," we have the Head Master's assurance that it is impossible for any teacher-in-training to copy during the examinations.—*Editor, C. E. M.*]

Editor of the School Magazine :

SIR,—The Ontario Society of Artists recently passed a resolution relative to the action of the Education Department, in wholly ignoring the existence of the professional skill of the Society, when making a selection of material for the Colonial Exhibition.

What else need the Ontario Society of Artists expect? It has already shown itself to be invertebrate, and ought not to complain when treated like a mollusk.

It did once make a kick against presumption, ignorance and dishonesty in high places; but it permitted itself to be so effectually snubbed that no doubt the Department now considers it quite snubbable.

When its representatives in the now so-called School of Art (naturally enough refusing to be bullied by a charlatan) handed in their resignation, it was accepted joyfully, and from that day until the present, the great Ontario Society of Artists has been virtually "locked-out."

Meanwhile, quackery, pretence and inebriety usurped—no, was specially appointed to run the machine, and most assuredly it has, as a machine, been very effectually run.

But this was only one snub; a parting kick as it were, for on a former occasion the Ontario Society of Artists had been even more disgracefully treated. Thus it was. There was going to be a levee at Government House, and a number of paintings were borrowed from the walls of the Society to fill up some vacancies in the vice-vice-regal mansion, where they still remain and are likely to remain, because the Society of Artists receives an annual pittance from the Legislature, and if said Artists were to make any fuss about it, they might whistle for another grant, and perhaps the grant would fail to answer their call!

Great is the power of snubbability; and in this case we find it difficult to say which party occupies the more pitiable position—the snubbers or the snubbed.

Now, what does the Society propose to do after entering its exceedingly mild protest against humbug, snubbery and jobbery? We shall see.

Yours, etc., TORONTO.

We submit the following as a partial explanation and answer to the above :

1. The Committee for the Selection of Paintings to be sent to the Colonial Exhibition was appointed by the Marquis of Lansdowne.

Mr. O'Brien, President R.C.A., represented the Academy; Mr. Griffiths, R.C.A., of London, for the Western School of Art; Hon. G. W. Allan, President O.S.A., the Ontario Society of Artists. The other Societies and Schools of Art had their representatives, but practically the management was in Mr. O'Brien's hands.

2. As far as the Society knows—neither the Minister of Education nor any official of his department had anything to do with the slight put on the Ontario Society of Artists.

3. In the amended Act, passed in the late session of the Ontario Legislature, respecting Mechanics' Institutes and Schools of Art, the

Act concerning the Ontario Society of Artists was embodied, and the grant of 500 dollars yearly was confirmed, so long as the membership reached twenty-five.

4. The paintings purchased by the Ontario Society of Artists were claimed by the late Minister of Education, and taken to the Government House, where they now are—they were claimed and taken under the supposition that the grant of 500 dollars was intended for the purchase of paintings for a Provincial Collection, and though explanations to the contrary were made by the Society, it availed nothing; from two or three years ago, the paintings were asked for to form a part of a loan exhibition at the Society's rooms, that application from the Society was refused.

As we take much interest in the work of the Society, we were pleased that their case stands so well.—
EDITOR, C. E. M.

THE SCRIPTURE READINGS.

BY J. H. KNIGHT, P. S. INSPECTOR, EAST VICTORIA.

A GOOD deal has been written of late against the selection of Scripture readings, and because the Board of Education for Toronto rejected the book, people have jumped at the conclusion that it should never have been prepared. I think the fact that the Scriptures are read in a great many schools where they were not read before, is ample proof that the action was wise.

The difficulty we laboured under was the perfect indifference of teachers, trustees and parents, as to whether the Bible was read or not. The teachers would read it if so instructed by the trustees. The trustees would order the teachers to read it if the parents expressed a wish to that effect. The parents thought it rested with

the teacher and trustees. Now it is read except where the trustees instruct the teacher not to do so.

As to the selections being only a part of the Bible, it is certain the teacher could not read the whole Bible to the pupils in a reasonable time, say once a year, and that would not be desirable, if possible, as the portions would be unnecessarily long; and it is certainly better to have the portion read too short than too long. Either the teacher or some one else must make the selections. If the teacher is likely to make a better selection, by all means let him use the Bible for that purpose. But if ministers who make their own selections are open to the imputation of giving too much prominence to one

portion and too little to another, how much more is the careless or designing teacher liable to err.

If the teacher reads from the Bible he is very likely to read to the end of a chapter, which is not always a good plan. The division into chapters (and verses for that matter) is no part of the Bible, and is in many places very unreasonable. If any one doubts this let him consult the revised version, or, better still, the new Lectionary in the Book of Common Prayer, which was introduced some twelve years ago, and he will see that the best place to begin and end is frequently elsewhere than at the division into chapters. I do not say that the selections are perfect. I think the text should in no case have been tampered with, but each selection should read as in the authorized version from the place of beginning to its close. At the same time a blunder in the division into verses, as in Psalm xcvi. v. 7-8, need not have been continued. The fact that in the Prayer Book version verse eight begins at "To-day if ye will hear His voice," should be sufficient authority for the correction.

I think it would have been better to affix a date to each selection, and let it be read on that day only. This would require a greater number of selections (or the reading of some of the selections twice in a year), as whatever was assigned to a holiday would be omitted for that occasion. But it would give the teacher no choice as to which selection should be read and which omitted, a very important advantage.

The only object in placing the

Bible in the hands of pupils at school is that they may read it verse by verse in turn. I am not in favour of this. As a general thing the Scriptures are read badly enough by ministers at church without their being murdered by children at school. What we want is that the teachers shall read the Scriptures in such a way that the children may listen attentively, intelligently and reverently. For this the teacher should prepare each selection beforehand, as he would prepare any other selection for public reading, and as every school lesson should be prepared.

Some people say it is useless to read the Bible to pupils unless it is explained. I do not believe it. Those who say so do not believe in the Bible as the Word of God. They may profess to do so, but practically they either doubt its power or they wish to pervert its teaching. If ever there was a book which told its story in a simple and intelligent manner it is the Bible. Sermons may enforce its doctrines, and Sunday-schools may lessen the labour of mastering its treasures, but their value may be overrated, and in proportion as we overrate the explanations we undervalue the Word itself. Its Author has said, "As the rain cometh down, and the snow from heaven, and returneth not thither, but watereth the earth, and maketh it bring forth and bud, that it may give seed to the sower, and bread to the eater; so shall My Word be that goeth forth out of My mouth: it shall not return unto Me void, but it shall accomplish that which I please, and it shall prosper in the thing whereunto I sent it."—Isaiah lv., v. 10, 11.

THE men who succeed without the aid of education are the exceptions. Common men need all the help that education can give,

and even of the exceptional men it may be said that they would have succeeded still better with the advantage of education.

CO-OPERATION AMONG TEACHERS.

ARNOLDUS MILLER, M.A., HEAD MASTER VIENNA HIGH SCHOOL.

I N a former article I ventured to state in a general way my views upon this subject. I wish now to direct the attention of my fellow teachers to some special points in which I think we are all more or less interested.

Lack of permanence in the profession has been, and is to-day, a crying evil. Men enter the sacred ministry, law, or medicine, with their minds fully made up to make the calling a life one, and only occasionally abandon it for another. Why is not this the case with the members of the teaching profession? Though it is the very foundation of all other professions, it stands to-day, if we are to estimate it by the emoluments, influence and esteem in which it is held at the very bottom of the professional ladder. I know of no class of professional men who are so weak, and whose usefulness seems so completely gone, as soon as the duties pertaining to their daily work are performed, as teachers. Fitted by our education to fill almost any public position now filled by the members of the other professions, we find it absolutely necessary, if we are desirous of occupying any position of trust and influence, to abandon our profession, and enter some other.

Does it not seem an anomaly that men are considered quite capable of becoming members of parliament, mayors of towns and cities, members of municipal councils, etc., after abandoning teaching, who, if experience teaches us anything, were not so considered as long as they were performing the duties of a teacher? As matters are now in this country, if a

teacher is bold and independent enough to take an active part in a political or municipal contest, or even in some social or philanthropic movement for the benefit of his fellow citizens, it falls scarcely short of a miracle in many places not a thousand miles from Toronto, if he does not jeopardize his position or lose it altogether. Such a state of affairs should not have a ghost of an existence in a free country like ours, and in this enlightened (?) nineteenth century. That things are as they are, is, I think, directly traceable to want of union—unity of feeling, unity of purpose, unity of action.

We not unfrequently see in the columns of our leading daily newspapers letters from teachers, complaining bitterly of their grievances. I would ask, who is responsible for the existence of these grievances? I unhesitatingly answer, ourselves.

Our educational machinery has been in operation nearly half a century; tinkered at, patched, remodeled, cut and carved, as it has been, its main features remain about the same. We have, by the changes made, got rid of a certain undesirable class of teachers, and have secured a much superior and more desirable class, and one whose members ought to be able to give a good account of themselves for their general and individual benefit. We have not, however, got rid of grievances, but to a very limited extent. In fact, I think in some respects we are worse off now than we were twenty-five or thirty years ago. Our burdens have been materially increased in preparing for entrance into the profession, and

our daily school life has been made almost unbearable by the "demon of change." On the other hand, our salaries have not been materially increased, while the cost of maintaining ourselves and families has been very materially increased, and we are, it would appear, powerless to resist these ever encroaching, ever increasing burdens and disabilities, cares and sorrows. Years have passed, and still we stand idly by, hoping that old Jove, or some other supernatural being, may miraculously help us out of our difficulties. As we have been inane up to the present, as we have put forth no honest effort to help ourselves, the son of Saturn has disdainfully looked down upon us, and has left us to our fate. The old adage, "he that will not help himself," etc., never had a better exemplification.

When we make up our minds to rouse ourselves to decided and united action, when we lay aside our little jealousies and prejudices, when we show ourselves true men and true women, we shall not lack all the aid we require. We shall better our positions in every particular when we show to those who seem to watch over our interests with paternal feelings, always, however, looking out for

"number one" (not a very elegant, but a very well understood phrase), that we are no longer children in leading-strings, but full-grown men and women, capable and willing to take care of our interests, and to manage our special business, not only in the daily routine of the school-room, but in the very important matter of examining and recommending to the authorities such persons as are desirous of becoming members of our profession.

Upon ourselves we must depend if we ever expect to secure our rights, and take that position in our country which we can and should take. To accomplish this successfully we must organize; and to make organization feasible, we must agitate this question of co-operation in every county association in the Province. Let it be a frequent topic of conversation among ourselves; let us get all the shades of opinion which such a question will naturally develop in so large a constituency; then when the time comes for crystallizing the matter into a Provincial Teachers' Co-operative Association, the way will be smooth and the atmosphere clear for those to whom may be entrusted the task of preparing the details of the scheme.

EDITORIAL.

THAT autocratic governments have no monopoly of tyrannical measures is well exemplified by the Primary Education Bill now before the French Chambers. M. Jules Simon, a former Minister of Public Instruction, on the adjourned debate of this Bill in the Senate, delivered an eloquent speech against the clause providing that the teachers of all subjects in public schools shall be exclusively laymen. He protested, he said, against the

clause, not in the name of religion but in the name of liberty, it being one of the most universally recognized principles of the Revolution, that all citizens were eligible for public employment. He insisted that the Republican party ought always to be the party of justice, liberty and progress. Alas, as Mr. Herbert Spencer teaches, "The defective natures of citizens will show themselves in the bad acting of whatever

social structure they are arranged into. There is no political alchemy by which you can get golden conduct out of leaden instincts." The Senate, however, after a long discussion, agreed, by 168 votes to 93, to the clause excluding monks and nuns, though fully qualified, from teaching in municipal schools.

THE UNIVERSITY OF MCGILL.—The Annual Report of the Governors of this University has just been issued.

The attendance is slightly in advance of former sessions, the total number of students being 564; students in medicine, 271; in arts, 223 (172 men and 51 women); in applied science, 50; in law, 25; besides 111 students in affiliated colleges.

The total receipts for the year ending June 30, were \$317,198; \$45,000 of which comes mainly from the gifts of the citizens of Montreal.

In the faculty of law there are seven professors and one lecturer; in medicine, twelve professors, besides lecturers and demonstrators.

In arts, nine professors and three lecturers, with expected additions to the staff.

In science, there are four professors, assisted by six gentlemen from the other faculties.

The Normal School has a staff of three professors, besides instructors in various branches.

The classes for women under the munificent endowment of Hon. D. A. Smith are in full and satisfactory operation in the junior years; in the course of two sessions, as the classes advance, there will be students in all of the four years. It is provided that the classes for women will be separate up to the standard for the degree. The examinations will be identical with those of the men, and the lectures delivered by the same professors.

TEXT BOOKS.

THE question of text-books, their preparation and authorization is up again for discussion.

This question will not "down." The interests involved are so important and so far-reaching in their effects that it is idle to expect peace in regard to this matter until we come to a more rational and satisfactory solution than that we have at present. The views of this magazine are so well known that it is unnecessary to take time to restate them. We have a political partisan Minister of Education, whose motto is, "I am first, a politician; second, an educationist." And to make bad worse, if that be possible, he is administering the affairs of his department without the aid of any recognized special advisers.

The other day the State Legislature elected the Chief Superintendent for the State of New York. The patronage under the control of the first executive officer of education for the important State of New York is very considerable. Here was the carcass; the birds of prey were not wanting. The educationists favoured one candidate, a gentleman and a scholar, one well fitted to take the lead in educational affairs. The politicians backed another candidate; need we add their candidate gained the day. The politicians were thoroughly organized to the tenth generation; the school men were units only. The result is chagrin and bitter disappointment to the scholars. Thus will it ever be, so long as teachers are treated as they are. Prepared, certificated and bullied by the heartless entity, the State. We commend to our readers the article on this subject from *Popular Science Monthly*.

REPORT OF THE MINISTER OF
EDUCATION FOR THE YEAR
1885, WITH THE STATIS-
TICS OF 1884.

A STRANGER, glancing over this Report, would have some difficulty in deciding whether the Public Schools, the High Schools, or the Art Schools were the leading feature in our system. Judging by the space given to the last named, he might say we made a specialty of drawing in this country; the prominence and space given to the reports of the High School Inspectors might lead him to believe that our High School system was with us a matter of paramount importance; while the position given in the front of the volume to matters connected with our Public Schools is the only clue that would lead him to the belief that the schools of the masses had our first consideration.

When Mr. Ross took charge of the Educational Department as Minister, we confidently hoped that educational affairs would soon show a change for the better, and in some respects we have not been disappointed. He has shown a praiseworthy regard for the interests of the country by the economy which he has introduced into the administration of his Department; though it is questionable whether that economy is always well-directed; he can claim that under his management the average attendance in both Public and High Schools has increased; and that elementary education has been made more practical by the prominence given to drawing as a Public School subject; under him too, "payment by results" has ceased to clog the working of our High School system. But Mr. Ross has failed to answer the expectations of his friends in his method of dealing with Temporary Certificates, or in securing the highest results possible from the Normal Schools. The present Report shows an actual increase of fifty-four

in the number of Temporary Certificates, and we have yet to learn that the Normal Schools are doing any better work than they did under the administration of Mr. Crooks.

STATISTICS OF ATTENDANCE.

	Counties	Cities.	Towns.	Province.
Registered attendance	356,981	55,044	54,892	466,917
Average attendance	158,129	32,916	39,816	221,861
Percentage of average attendance ...	44	60	56	48

There was a slight decrease in the registered attendance in the counties as compared with the previous year, but this was more than counterbalanced by the increase in the cities and towns, thus causing a trifling increase for the whole Province. In the average attendance and also in the percentage of average attendance, there was a small but gratifying increase all round. Owing to the peculiar way in which the average attendance is reckoned, however, the results are misleading. The Department uses the *legal* number of teaching days, instead of the *actual* number in the year as a divisor, and as the latter, especially in cities, is always less than the former, the foregoing numbers for average attendance are not strictly correct. Take the case of Haliburton, which has the lowest average attendance of any county in the Province. The Inspector reports that the schools in that county were kept open 173 days on the average, and using this number as a divisor, he finds the average daily attendance was 664; from this we find that the percentage of average attendance was 43, while the Report gives it as 34. The highest percentage of average attendance for the counties was 51 in the County of Ontario, the lowest was that in Haliburton as above stated, and Frontenac is but little ahead of it. Stratford and

Bothwell, among the towns, take the lead with an average of 66 per cent. ; while Port Arthur, owing, we suppose, to its rapidly growing population, stands lowest with a percentage of 35. Toronto stands foremost among the cities with an average of 65 per cent., and St. Catharines brings up the rear with only 53. Hamilton, that used to hold the first place, is down among the fifties. Indeed only one other city besides Toronto can claim an average attendance of more than 60 per cent., and that is Brantford. There were 90,959 children between the ages of 7 and 13 years, who violated the law by not attending any school for a minimum of 110 days, and 6,230 children between these ages did not attend any school whatever. Neither of these numbers however, represent the full magnitude of the evil of non-attendance, for many cities and towns make no returns under these heads. Why does not the Minister of Education make them do so? We may safely conclude that thirty per cent. of the children of school age receive little or no benefit from our admirable Public School system. We have pointed out the evil of this state of things so often, that at last Mr. Ross's attention is drawn to it, and he admits "that one great problem requiring our attention is *how to increase the average attendance.*"

NUMBERS IN THE VARIOUS SUBJECTS OF INSTRUCTION.

Of the total number of pupils registered 36 per cent. were in the First Book, 23 in the Second, 24 in the Third, 15 in the Fourth, and 2 per cent. in the Fifth; 90 per cent. were in arithmetic, 89 in writing, 60 in geography, 53 in drawing, 47 in grammar and composition, and 20 in history.

RECEIPTS AND EXPENDITURE.

The total receipts for 1884 were \$3,723,138, an increase of \$152,409,

or 4 per cent. on those of the previous year. This amount was made up of \$267,084, or 7 per cent. from the Legislative Grant, 72 per cent. from school rates, and 21 per cent. from clergy reserves and other sources. The total expenditure was \$3,280,862, an increase of \$172,432, or 5 per cent. on that of the previous year. The main item of expenditure was that for teachers' salaries, which amounted to \$2,296,027, or 70 per cent. of the whole.

COST OF PUBLIC SCHOOL EDUCATION.

Cost per pupil in average attendance, counties, \$15.09; cities, \$15.03; towns, \$12.96; Province, \$14.79. These figures are higher than those of 1883, and the cost for the Province shows an increase of 37 cents. As usual, the cost per pupil in average attendance in the counties is a little more than that in the cities, and much more than the cost in towns,—this is owing to their low average attendance. In Haliburton, among the counties, it was highest, being \$20.64; while in Stormont it was lowest, being only \$10.76. No fair comparison can be made among the towns, because of the great variation in the expenditure on sites and buildings. The same remark applies to the cities.

STATISTICS OF PUBLIC SCHOOL TEACHERS.

In 1884 there were 7,085 teachers employed, comprising 2,789 males and 4,296 females. The number of the latter shows an increase, while that of the male teachers shows a slight decrease upon the number for 1883. In 1876 the percentage of male teachers was 45, in 1884 it had sunk to 40, while that of female teachers had proportionately increased. Should the same state of things continue indefinitely, we may conclude that females will be the teachers of the future.

SALARIES.

	Counties.	Cities.	Towns.	Province.
Average Salary of Males	\$ 404	\$ 791	\$ 612	\$ 426
" " Females.....	264	364	283	279

In every instance these figures show an increase over those of 1883. For the Province the increase was \$4 in the case of males, and \$8 in that of females. Comparing the above figures with those of 1876, we find that the average salary of male teachers has advanced \$41, or not quite 10 per cent., while that of female teachers has advanced \$19, or a little over seven per cent. in nine years. Mr. Ross may well admit that the increase is not very large. However, it has been steady, and as the profession of teaching grows in public estimation, and it will be the fault of the teachers themselves if it does not grow, we may anticipate a more liberal remuneration for it. The highest salary paid in 1884 was \$1,200; this compares unfavourably with the highest salaries paid in both Britain and the United States. The county that takes the lead in paying the highest salary to both males and females is Brant.

CERTIFICATES.

Number of teachers holding the various kinds of Certificates:—First Class, 403; Second Class, 2,355; Third Class, 3,420; Temporary and other Certificates, 907.

These figures show a slight increase in the number of teachers holding First Class Certificates, those holding Certificates of the Second Class have increased to a much larger extent, but there has been a remarkable bringing to life of old County Board Certificates amongst these. During the previous nine years there was a gradual, though not continuous, decrease in the number of Third Class teachers, with a

proportionate increase in that of the Second Class; and, were this fact taken by itself, it would be a favourable augury for the future of our schools. But we have the disagreeable fact staring us in the face that in 1884 there were no less than 907 persons in charge of schools without the legal qualification. It was confidently hoped that when Mr. Ross took charge of the Education Department he would vigorously assail the system of giving permits to persons that were not duly qualified to teach. The hope has proved a delusive one, for the number of persons teaching under temporary and other bogus certificates in 1884 was 54 in excess of that of 1883. These figures are taken from Table C, pp. 14 and 15; but they do not agree with those in the synopsis on p. xvi., where the total number given is 1,193. On page 112 we find that the Minister of Education authorized 310 Temporary Certificates, and extended 409 Third Class which would otherwise have expired. Mr. Ross may well remark that "there is still a tendency on the part of some teachers to remain satisfied with any qualification which entitles them to conduct a Public School"; and while he continues to authorize so many Temporary Certificates, he cannot free himself from the responsibility of encouraging this tendency. No one can have sounder views than he on this matter, for in another place he remarks: "Other things being equal, the best educated man or woman invariably makes the best teacher"; and yet he gives his sanction to about 20 per cent. of the teachers of the country working under Temporary Certificates, because a great many of them are either too lazy or too incapable to take a permanent Certificate of qualification.

One of the most instructive and interesting features of previous issues of this volume was the reports of the various local inspectors upon the con-

dition of education in their districts. These have been largely curtailed in the present issue, and the eight pages given to them contrast strangely with the twenty pages devoted to reports on the Indian schools. In looking over those that are inserted, we, as usual, find useful material for forming opinion on some of the educational matters of the day. Dr. Kelly, for instance, makes a remark with regard to the proper method of inspecting which is well worth the serious consideration of less experienced Public and High School Inspectors. He says: "A conclusion, favourable or unfavourable to the management of a teacher, should not be hastily come to. I have frequently found the bad, sometimes the good, impression removed by a second visit." Mr. Smirle, Inspector of Carleton, strikes straight at what the most thoughtful of our educators regard as a weakness in the training of Public School teachers. Speaking of Model Schools he says: "There seems to be too much of the ideal, and too little of the practical, to suit the great body of teachers destined to work in the humbler ranks of the profession, more especially in the want of practice in such a school as may be met with in an ordinary rural section where the teacher takes charge of, say, forty pupils, and works all the classes from the first to the fourth concurrently. Such is the work that by far the greater number of Public School teachers must engage in; but, strange to say, it is the kind of work for which very imperfect provision has yet been made in either Provincial or County Model Schools." Mr. Ferguson, Inspector of South Grey, brings before us in a few forcible words the benefits that would arise from consolidating the school sections in each municipality, and placing them under township boards. The administration of school affairs would then be "more equitable and economical, as well as more promotive

of the true educational interests of the community; it would render the schools, in many cases, more generally accessible; would relieve neighbourhoods of local jealousies; relieve township councils from some of their most disturbing and perplexing questions, and even county councils of many vexatious appeals."

SEPARATE SCHOOLS.

According to the statistics in this Report the Roman Catholic Separate Schools are in a flourishing condition. In every important respect do they show improvement; in the registered attendance, in the number of teachers, in the receipts and expenditure, in the percentage of average attendance, and in the cost per pupil. In the latter two respects they compare favourably with the Public Schools, in which the percentage was 48, while in the Separate Schools it was 53; in the Public Schools the cost per pupil in average attendance was \$14.79, in the Separate Schools it was \$12.12; but while the item for Public School teachers' salaries was 70 per cent. of the whole expenditure, that for the payment to Separate School teachers was only 54 per cent., owing to the fact that many of these teachers are members of religious orders, and, as such, receive merely nominal salaries. This will largely account for the difference in the cost per pupil. For this good report the supporters of these schools receive a pat on the back from Mr. Ross, and a promise that so far as the Department is responsible for their prosperity, it will give him great pleasure to see the Separate Schools raised to the highest possible standard of usefulness and efficiency.

NORMAL SCHOOLS.

The statistics of these schools are most unsatisfactory. No statement is made as to their cost to the country, nor any indication given of the average cost for each student who takes

Certificate. We are told that 31 males and 93 females were admitted to the Toronto Normal School the first session of 1885, and 40 males and 80 females the second session. Similar statistics are given for the Ottawa School; but these figures are of very little value unless accompanied by those telling how many left without taking Certificates, and how many were successful at the final examinations. The only means of finding out this last important item is by reference to the lists of names of those who received Certificates from each school, which are found on pp. 107-111. We have taken the trouble to count these names, and we give our readers the results for the year 1885:—

OTTAWA NORMAL SCHOOL.		Total.	1st Session.	2nd Session.
		161	94	67
		149	94	55
		93	100	82
TORONTO NORMAL SCHOOL.		Total.	1st Session.	2nd Session.
		244	124	120
		231	118	113
		95	95	94
		Students admitted	124	120
		Certificates granted	118	113
		Percentage who gained Certificates.	95	94

Comparing these with the numbers given above our readers will see in what a muddle the statistics of these schools are. But whatever numbers we take the percentages reveal a remarkable state of things. There was a time when we were able to congratulate the country upon the care taken in the Normal School examinations to cull out those who were likely to prove inefficient teachers, and we contrasted the percentage of those who passed with that of those who passed in the County Model Schools for Third Class Certificates. This contrast exists no longer, for we find that the Model Schools, as a whole, passed but 94 per cent. of their candidates. From a very useful table on page xxx., we find that of 4,541 candidates examined for Second and Third Class Non-Professional Certificates in July, 1885, only 2,087, or 46 per cent., were successful. Are we to infer, then, that the non-professional examinations are so much more difficult than the professional examinations, that while less than one-half the candidates pass in the one, more than nine-tenths pass in the other. We fear not; for on looking over the statistical table of County Model Schools on page 84 we find that 30 per cent. of the students were rejected at Goderich and Strathroy; 29 per cent. at London; 28 per cent. at Mount Forest; and 21 per cent. at Cobourg. A rumour has been spread by the students themselves that extensive cribbing went on last year at the Toronto Normal School. Did the same thing go on at Ottawa, and does this account for the high percentage of passes? There may be some ground for these surmises about the Toronto School, for the man, who, by his marks, was entitled to the gold medal at the last examination, lost it on account of cribbing, though the Minister, very unwisely, we think, allowed him to receive a Certificate. It would be amusing, were the matter

On page 106 we find a table which gives 245 and 151 as the number of Certificates granted in Toronto and Ottawa Normal Schools respectively.

less important, to read Dr. McLellan's report as Inspector of Normal Schools in the light of the above facts and figures. The Doctor is a prophet of smooth things; he says we have approached, if we have not yet quite reached, the ideal Normal School! He declares that the system of professional training adopted by the Education Department is the soundest, most practical, and most economical that has hitherto been devised by any State. The students are able to devote themselves with energy to learning the noblest of all merely human lessons—the best, easiest, and most pleasant method (“of cribbing,” say some of our cynical readers) of imparting instruction to others, and so contributing to form that intellectual and moral manhood which is the very essence of national life. One of the pleasant methods to which, no doubt, the Doctor refers, is that of criticising each other's language and style of work; and some of the students at one of the Normal Schools devoted themselves with so much energy to this, that, not finding the field wide enough among their fellow-students, they fell to criticising their teachers, and had actually the audacity to lay their criticisms (complaints some people would call them) before the Minister of Education. Dr. McLellan, with a wonderful prevision of such conduct, warns the students against jotting down every little *lapsus lingue* of lecturer or student, and points out the error of mistaking fault-finding for criticism. Before quitting the subject of Normal Schools, let us express the hope that Mr. Ross will take measures to have inserted in his next report statistics of them similar to those which Mr. Tilley supplies of the County Model Schools.

HIGH SCHOOLS.

The total registered attendance in our High Schools and Collegiate Institutes for 1884 was 12,738, an in-

crease of 894 on the attendance of 1883. The percentage of average attendance was 57, this shows an increase of 2 per cent. The receipts were \$407,977, or \$20,089.35 over those of 1883. The expenditure was \$385,426, an increase of \$36,479, and the cost per pupil on average attendance was \$52.78, a decrease of \$1.29. These figures show that our High Schools are flourishing. Of the total number of pupils 35 per cent. studied Latin, 7 per cent. Greek, 40 per cent. French, and 9 per cent. German, 9 per cent. matriculated, or entered the learned professions, 6 per cent. entered mercantile life, while only 4 per cent. devoted themselves to agriculture. To the Strathroy Collegiate Institute belongs the honour of being the only school in which agriculture is a subject of study. The total number of teachers employed was 358, the amount paid for salaries \$282,775.95, hence the average salary was \$790. The salaries of head masters range from \$2,300 in Toronto to \$750 in Streetsville. In only 39 of these schools are fees ranging from \$3 to \$26 per annum charged; the remaining 67 are free. We are glad to see that Mr. Hodgson in his report recommends, what we have more than once urged, that a minimum fee should be charged to pupils attending our High Schools. Seeing that the average cost per pupil is so high, nearly four times as much as that of the pupils attending our Public Schools, it is quite reasonable to expect parents to contribute to this cost by a specific payment in the shape of a school fee.

A great deal of interesting matter is contained in the reports of the two High School Inspectors. Mr. Hodgson's remarks upon the teaching of English are particularly instructive; and Mr. Seath's report is exhaustive in more senses than one.

NOTE.—Junior Matriculation and Second Class Teachers' Examination begin 28th June; Third Class, 6th July; and First Class, 12th July.

SCHOOL WORK.

MATHEMATICS.

ARCHIBALD MACMURCHY, M.A., TORONTO,
EDITOR.

PROBLEMS.

SELECTED.

45. 5 men do 6000 of a piece of work in 2 1/2 hours. How long will 6 boys take to finish it, it being known that 3 men and 7 boys have done a similar piece of work in 3 hours?

46. Prove, that if $x < 1$

$$\frac{x}{1-x^2} - \frac{x^2}{1-x^4} + \frac{x^3}{1-x^6} - \dots$$

$$= \frac{x}{1+x^2} + \frac{x^2}{1+x^4} + \frac{x^3}{1+x^6} + \dots$$

47. If $p = lx + my + nz$

$$q = nx + ly + mz$$

$$r = mx + ny + lz,$$

and if the same equations be true for all values of x, y, z , when p, q, r are interchanged with x, y, z respectively, show that $l = m = n = \pm \frac{1}{2}$.

48. A straight line cuts three concentric circles in A, B, C , and passes at a distance p from their centre. Show that the area of the triangle formed by the tangents at A, B, C , is $\frac{BC \cdot CA \cdot AB}{2p}$.

49. Shew that if

$$\frac{a^2(b-c)}{x-a} + \frac{\beta^2(c-a)}{x-b} + \frac{\gamma^2(a-b)}{x-c} = 0$$

has equal roots, then

$$\pm a(b-c) \pm \beta(c-a) \pm \gamma(a-b) = 0.$$

Selected by Miles Ferguson, H. S., Niagara Falls South.

50. If in a triangle, $a \tan A + b \tan B =$

$$(a+b) \tan \frac{A+B}{2}, \text{ show that } A=B.$$

51. If $a+b+c+d=0$, prove that $a^3+b^3+c^3+d^3 = 3(bcd+cda+dab+abc)$.

SOLUTIONS.

By Prof. Edgar Frisby, M.A.

28. $x^3 - 3ax^2 + 3bx - c = 0$. Let $x = a + z$, then $z^3 - 3(a^2 - b)z - (2a^3 - 3ab + c) = 0$; or $z^3 - 3pqz - (p^3 + q^3) = 0$. (Given conditions.)

One solution of this equation is evidently $z = p + q$, for $z^3 = p^3 + q^3 + 3pq(p + q)$; or $z^3 = p^3 + q^3 + 3pqz$; that is, $z^3 - 3pqz - (p^3 + q^3) = 0$, the same equation. Now if we substitute for p, q , the values pw, qw and pw^3, qw^3 , this equation remains unchanged, for $w^3 = 1$; the three values of z are therefore $p + q, pw + qw^3$ and $pw^2 + qw$, $x = a + z$; therefore $x = a + p + q, a + pw + qw^3$ and $a + pw^2 + qw$, which is

$$\frac{(a+p+q)(p-q)}{p-q} = \frac{ap-q^2-(aq-p^2)}{p-q} =$$

$$\frac{p-q}{r-s} \frac{(a+pw+qw^3)(p-qw)}{p-qw} =$$

$$\frac{ap-q^2-(aq-p^2)w}{p-qw} = \frac{r-sw}{p-qw}; \therefore w^3 = 1.$$

$$\frac{(a+pw^2+qw)(p-qw^2)}{p-qw^2} =$$

$$\frac{ap-q^2-(aq-p^2)w^2}{p-qw^2} = \frac{r-sw^2}{p-qw^2}; \therefore w^3 = 1.$$

This is the ordinary solution.

UNIVERSITY OF LONDON

EXAMINATIONS, JANUARY, 1886.

ARITHMETIC AND ALGEBRA.

Examiners—Prof. A. G. Greenhill, M.A.,
and Prof. M. J. M. Hill, M.A.

1. Divide the cube of 1'236068 by 2'36068 correctly to five places of decimals.

2. Extract the square root of $\sqrt{\frac{1}{2}}$ to seven places of decimals.

3. Given that a metre is 39'37079 inches, prove that the difference between 5 miles and 8 kilometres is nearly 51 yards. [A kilometre is 1000 metres.]

4. A bill for £603 drawn October 4th at four months is discounted November 26th at

2½ per cent. per annum. Find the true discount, allowing the usual three days' grace.

5. Prove that

$$\left(\frac{x^2 - x + 1}{12}\right)^2 - 27 \left\{ \frac{(x+1)(2x-1)(x-2)}{432} \right\}^2 = \frac{x^2(x-1)^2}{256}$$

6. Divide $x^{10} + x^8 + 1$ by $x^2 + x + 1$, and multiply the result by $x^4 + x^2 + x + 1$.

7. Find the sum of all the numbers in the first million divisible by 3 without remainder.

8. Find the geometrical progression of five terms, of which the first and last terms are $\frac{1}{2}$ and $\frac{1}{8}$.

9. Solve the equations—

$$(i.) \frac{x + \frac{2}{3}}{3} - \frac{10\frac{2}{3} - x}{3\frac{1}{2}} = \frac{1}{2}$$

$$(ii.) \frac{\sqrt{a} + \sqrt{a-x}}{\sqrt{a} - \sqrt{a-x}} = b.$$

$$(iii.) \frac{1}{x} + \frac{1}{y} = 12, \quad \frac{3}{x} - \frac{4}{y} = 1.$$

10. A mechanic is hired for 60 days, on condition that for each day he works he shall receive 7s. 6d., but for each day he is idle he shall pay 2s. 6d. for his board, and at the end he had received £6. How many days did he work?

LATIN GRAMMAR AND COMPOSITION.

Examiners—Leonhard Schmitz, Esq., Ph.D., LL.D., F.R.S.E., and Prof. A. S. Wilkins, LL.D., M.A.

1. Decline in the singular and plural *nobile genus*, *domus sublimis*, *mulier sagax*, and in the singular only *Jupiter vindex*, *quihbet utervis*, *unusquisque*, *supellex*.

2. Write down the comparative and superlative degrees of *pulcher*, *gracilis*, *mendax*, *nequam*, *arduus*, *prope*, *multus*.

3. State the different ways in which adverbs are formed from adjectives, with illustrative examples.

4. Write down the third person plural of the perfect indicative of the following verbs, *sterno*, *sepelio*, *surgo*, *parco*, *arcesso*, *emo*, *ulcisor*, *obliviscor*.

5. Give a full account of the meaning and construction of the gerundive with four examples.

6. Give the different constructions of *opus est* and *circumdo* with examples.

7. Translate into Latin:—

(a) I am ashamed of my former laziness.

(b) Would that I had been with you at that time of danger.

(c) I am persuaded that he will not be able to finish this business before the first of May.

(d) It cannot be denied that he has erred in entrusting to that slave so important an affair.

(e) If I had known that you had resolved to go to Athens, I should have asked my brother to accompany you.

(f) He told me why his brother had done this.

(g) When Cæsar arrived in Gaul, he found the country in a great commotion and in fear, lest the Germans should cross the Rhine and make themselves masters of the country.

ENGLISH LANGUAGE.

Examiners—Henry Craik, Esq., M.A., LL.D., and Prof. John W. Hales, M.A.

[N.B.—Not more than ten questions are to be attempted; and in the ten must be included Nos. 1, 14 and 15.]

1. Write out and punctuate the passage read by the examiner.

2. Show clearly that English in its origin and basis is a Teutonic language.

3. Also say by what Teutonic languages it has been affected and influenced since its coming into this island.

3*. Mention the various times and ways in which Latin, directly or indirectly, has increased our vocabulary.

4. Make a list of all the flexions the English verb has now left it. How is it there are so few; and how do we manage to get on with them?

5. What is meant by the "Organs of Speech"? How would you define a "vowel"? How a "diphthong"? How many more vowel-sounds has English than vowels?

6. In what various ways are the letter *g* and the combination *gh* pronounced in English? How do there come to be various ways?

7. Can you explain the italicised letters in the following words:—Children, would, could, against, gender, victuals, frontispiece, crayfish, mice?

8. Mention some nouns (i.) with two plural forms, (ii.) with no plural form, (iii.) with only a plural form, (iv.) of plural form which are treated as singular, (v.) of singular form which are treated as plurals.

9. Describe our two conjugations. To which belong the verbs—have, go, read, fall, think, fight, hang, send, wash, feel? Why may we not say, "He cans do it"?

10. Explain the term "preposition." How does a preposition differ from a conjunction? Mention some prepositions that have become conjunctions.

11. Parse each of the four words, "But me no buts." What other parts of speech may "but" be? Would you say "They all ran away but me," or "They all ran away but I"?

12. Give half a dozen instances of words of which the present spelling obscures the etymology. How did such spelling come into fashion?

13. What is meant by an "idiom"? Mention two or three English idioms, and try to explain them.

14. Criticise the grammar or the style of these sentences:—

(a) It is characteristic of them to appear, but to one person, and he the most likely to be deluded.

(b) I think it may assist the reader by placing them before him in chronological order.

(c) Few people learn anything that is worth learning easily.

(d) My resolution is to spare no expense in education; it is a bad calculation, because it is the only advantage over which circumstances have no control.

(e) Image after image, phrase after phrase, starts out vivid, harsh and emphatic.

CLASSICS.

G. H. ROBINSON, M.A., TORONTO, EDITOR.

BRADLEY'S ARNOLD.

BY M. A.

Exercise 38.

1. Litterarum fuit ille semper studiosissimus; laboris idem, frigoris, aestus, inediae vigiliarum, patientissimus; illud equidem vereor. Ne parum sibi o'ii ac quietis concedere velit. 2. Tantum erat militum studium pugnandi, tanta omnium alacritas, ut peritissimo ejusmodi militiae duci dicto audientes esse nollent; et dum sui fiducia et hostium contemptu pleni, et alius alium hortantes, tanquam ad exploratam victoriam procedunt, subito in insidias imprudentes praecipitaverint. 3. In summa reipublicae dissensione, ea tamen amicitia quae mihi erat cum patre tuo, viro fortissimo, et mea et illius spe diutius permansit. 4. Divitiarum illi satis erat superque, sed reipublicae imperitissimus fuit, et famae idem vel laudis vel auctoritatis vel potentiae parum appetens et ab omni magistratu vel honorum contentione alienissimus. 5. Isti vero, horum laborum expertes omnium, voluptatum otique appetentes, reipublicae neglegentissimi, epularum gulaeque studiosissimi, eo imprudentiae processere, ut exercitui omnium diutini belli incommodorum patientissimo luxuriam desidiarumque me audiente ausi sint objicere.

Exercise 41.

1. Quum Veis in oppido tum temporis et multitudine civium et maximis opibus frequentissimo atque opulentissimo multos jam annos viveret ad urbem inde Romam, quae quatuordecem millia ferme a veteri domicilio aberat, senex commigravit. 2. Parentes ejus a Syracusis oriundi, Carthagini jam diu domicilium habebant; ipse Uticam ad avunculum puer missus, triennium totum domo abfuit: sed postquam ad matrem jam viduam Carthaginem rediit, reliquam adolescentiam domi suae degit. 3. Hostes vix jam unius diei iter aberant; arcis muri, vix plus viginta pedes alti, et fossae minus sex

pedum cincti, vetustate corruerant. 4. Doria quum sex dies subsidia frustra expectavisset, literas Pisam ad praefectum misit, quibus eum oravit obsecravique ne tempus ultra tereret, sed ut milites sibi auxilio confestim adduceret. 5. Londini, in urbe omnium maxima et frequentissima nato educatoque, strepitum u bis ac multitudinem vitae rusticae otio, securitate, et infrequeritiant permutarem nunquam antea, nesemel quidem mihi concessum est. Jam vero brevi me Romam ad filium meum iter facturum spero, ex Italia autem an'e mediam hiemem ad Constanti-nopolim navigaturum, quam urbem *visere iamdudum* gestio; te puto Melitae hiematurum esse, quam ego insulam numquam sum visurus. Veris initio Neapoli in pulcherrima urbe commorari statui et Londinum ad veterem domum mense Maio vel Junio me conferre. 6. Caesarem puto vix minus domi se quam militiae propositi tenacem praestare dicunt eum ad urbem esse, triumphum expectare, apud populum verba facere velle. 7. Injuriis Napoleonis ac contumeliis lacessiti irritaque Hispani ad Anglos tandem veteres hostes sese converterunt.

SCIENCE.

H. B. SPOTTON, M.A., Editor, Barrie.

DISTRIBUTION OF TREES IN CANADA.

Mr. A. T. Drummond, in a paper read before the British Association last year, on "The Distribution of Canadian Forest-Trees," ascribes an important part to the existence of large bodies of water in the eastern part of the country, and of conditions under which a much milder climate is given, with a higher range of trees, on the western side of the continent. Then, in the United States and Canada the mountain-ranges are somewhat continuous, and have a northern and southern trend, affording an opportunity to the northern trees to extend southward on their flanks, and to the southern trees to range northward in the valleys; and this has given rise to a more extended distribution than could otherwise occur. Another important element in the distribution is the

chain of the lakes, which forms a barrier to the free extension into Canada of the southern forms common in our "lake States." Nevertheless, the currents of the lakes have been the means of distributing seeds on the jutting headlands of the northern coast, where a few southern forms have been found. On the other hand, the cooling effect of such large bodies of water encourages the growth of northern species, and thus around the coasts of Lake Superior the flora includes a few semi-Arctic plants, though inland these all disappear, and the vegetation is of a more northern temperate type. Only a few trees have the faculty of making themselves at home over as wide an extent as some herbaceous plants; and these are those usually which have light or winged seeds. One reason for the different development of this faculty in trees and herbs is probably that the seeds of trees are of greater size and weight, and less easily carried away from their parent. A break in the westward extension of a considerable number of the forest-trees occurs beyond Lake Superior and Red River. This is ascribed to the greater dryness of the climate west of that lake, the effect of which is also seen in the alleged superior quality of the wood of the aspen and spruce trees. Too much moisture in the atmosphere has also its results in determining the range of trees. The same causes which prevent the range westward beyond Red River of many of the Eastern trees also prevail in restricting the eastward range of the British Columbia trees beyond the influence of the Rocky Mountains.

THE CLASS-ROOM.

DAVID BOYLE, Editor, Toronto.

ARITHMETICAL PROBLEMS.

By Leo. B. Davidson, Head Master Public School, Sault Ste. Marie.

1. A man spends $\frac{3}{8}$ of his money and \$5 more, and then he has left $\$ \frac{1}{2}$ less than half his money.

(a) Find his first money.

(b) Find what he has left.

Ans. (a) \$45; (b) \$22.

2. A bankrupt's stock is valued at \$3,500. This amount will enable him to pay his creditors 62½ cents on \$1.

- (a) Find his liabilities.
 (b) Find the debt due a creditor who receives half the value of the assets.

Ans. (a) \$5,600; (b) \$2,800.

3. By using a "light" pound weight a grocer gets 64 cents for a 60 cent package.

- (a) Find the weight of his pound.
 (b) The extent to which he cheats on a purchase amounting to \$2.40 by his weight.

Ans. (a) 15 oz.; (b) 15 cents.

4. Reduce 1 fur. 1 per. 1 yd. 1 ft.,

- (a) to the decimal of 2 miles.
 (b) to the fraction of 2 miles.
 (c) Prove the equality of your answers.

Ans. (a) .064441287; (b) $\frac{11111}{11110}$.

5. A grocer sells a quantity of tea for 45 cents per pound, gaining $\frac{1}{4}$ of prime cost. The total gain was \$5.

- (a) How many pounds did he sell?
 (b) What advance on this selling price should he make to gain half as much again?

Ans. (a) 50 lbs.; (b) $\frac{1}{4}$.

6. A and B can do $\frac{1}{2}$ a piece of work in $1\frac{1}{2}$ days. A and C can do $\frac{1}{2}$ of the remainder in $\frac{1}{2}$ days. A B and C can finish it in $\frac{1}{2}$ days.

- (a) In what time can A do it alone?
 (b) In what time can C do it alone?

Ans. (a) 4 days; (b) 6 days.

7. A person has \$25.80 made up of five-cent, ten-cent, twenty-cent, twenty-five-cent, fifty-cent and dollar pieces. He has four times as much money in 10's as in 5's; one-third as much in 10's as in 20's; fifteen times as much in 25's as in 5's; ten times as much in 50's as in 10's; and $2\frac{1}{2}$ times as much in \$'s as in 50's.

- (a) How many coins has he?
 (b) Find the least number of coins of these various denominations that would be required to make up the amount mentioned.

Ans. (a) 54; (b) 31.

8. A borrowed from B \$500 on January 7th, 1886. On March 21st B paid A \$507.

- (a) What rate of interest did A charge B?

(b) Down to what date must the note run to amount to \$2.837½ more?

Ans. (a) 7 per cent.; (b) April 30.

9. The expense of carpeting a floor with 30-inch carpet at 75 cents a yard was \$50; but if the breadth of the floor had been 4 feet more the expense would have been \$60.

- (a) Find the breadth of the floor.
 (b) Find the length of the floor.

Ans. (a) 20 ft.; (b) 25 ft.

10. How many bricks, 9 inches long, 4½ inches wide and 4 inches thick, will be required to build a wall 4 feet high and 1 foot 6 inches thick round a lot containing 9½ acres, whose width is 30 rods, allowing the mortar to make up $\frac{1}{4}$ of the entire wall.

Ans. 158,400.

EAST MIDDLESEX PROMOTION EXAMINATION.

APRIL, 1886.

In submitting selections from the papers used at this examination, and which were prepared by Inspector Dearness, we feel that it is due to him to state that in our estimation the exercises are remarkable for their originality.

In the composition papers woodcuts are introduced, and the pupils' observing and imaginative faculties are brought into play, because a critical examination of the picture is necessary before anything can be written regarding it. For example, on the paper in this subject for the 3rd and 4th classes is an illustration of a boy standing beside a broken rail and wildly gesticulating to prevent disaster to the train which is seen approaching the spot, and this is the way the subject is presented to the class:—"A subscription was taken up in behalf of the boy in this picture. It was large enough to pay the expenses of giving him a college education. From this hint, and what you can infer from the picture, try to construct his story." Herein, so far as it goes, consists true education, and Mr. Dearness is to be congratulated upon being the first, as far as we know, to introduce this method in examination papers in Ontario.

From the "notices" accompanying the

set of papers, one may see the progressive character of the Middlesex schools. The management committee of the association has arranged for procuring educational papers for the teachers, and suitable reading matter for the pupils at the lowest club rates. Saturday, the 1st of May, was set apart for the consideration of: "1st. The best kinds of trees to plant in school grounds; 2nd. How to plant; 3rd. What other outside occupations are appropriate to Arbour Day; 4th. Indoor exercises and how to conduct them; 5th. The organization of a reading circle, and 6th. The formation of a class in practical botany."

Intimation of Arbour Day on the 7th of May was announced, and encouragement given to all to participate in the outside and indoor exercises of the day.

ARITHMETIC—3RD TO 4TH.

Time, 3 hours.

Limit of Work.—Practical applications of the four simple rules continued. Factoring continued. Reduction and the compound rules. Cancellation. Measures and multiples.

1. (a) How many times must 19 be added to 87 to give ten thousand one hundred?

(b) How many times must 18 be subtracted from fifty-eight hundreds to leave 58 units?

(c) How many times 17 will give the same product as 69 times 289? [18.]

2. A grocer mixes 23 lbs. of tea worth 38c. per lb., 9 lbs. worth 45c. per lb., and 7 lbs. worth 50c. per lb. What is the mixture worth per lb.? [8.]

3. Reduce:

(a) 13 tons, 9 cwt., 48 oz., to lbs.

(b) 3,520 yds., oft., oin., to miles.

(c) 8,694,569 weeks to days.

(d) 8 gallons, 96 quarts, 64 pints to gallons. [16.]

4. In February a teamster drew 23 cords of gravel all but 4 cubic feet. His gravel box held 1 cubic yard, 1 cubic ft.; how much did he earn at 55 cents per load? [10.]

5. Make a bill of the following items. Use your ruler in drawing the lines needed for the bill.

Mrs. Selwyn bought of R. F. Smith & Co.

Feb. 27—3 lbs. 8oz. cheese @ 12 cents per lb.

12 oz. tea @ 64 cents per lb.

Mar. 13—1 lb. 6 oz. coffee @ 32 cents per lb.

4 doz. and 6 eggs @ 16 per doz.

Apr. 10—3 quarts vinegar @ 60 per gallon.
22 lbs. bacon @ \$9 per cwt.

[25.]

3 marks for the correct work of each item put on paper and denominations all written, 1 mark for correct amount without the work, 2 marks for correct entry and addition of the items, and 5 marks for a neat and correct form of bill.

6. Timothy seed per bushel of 48 lbs. is worth \$2.60; how much will it cost to seed a field 40 rods long by 24 rods wide, sowing 24 lbs. to the acre? [10.]

7. Bought 2,240 lbs. of wheat at \$1.20 per cwt., and sold it at 78 cents per bushel, find the gain. [10.]

8. At 46 cents per bushel (60 lbs.) how many lbs. of potatoes will pay for 1840 lbs. of hay at \$9 per ton? [10.]

9. At \$8 per thousand find the price of enough lumber for a tight board fence 6 feet high and 10 rods long. [10.]

10. Find the lowest number that contains all the following as factors: 6, 15, 70, 220, 231, 275, 8,712. [10.]

A maximum of 10 marks for neatness and style of work may be allowed on this paper; exclusive of these require 30 marks as a minimum for promotion. Count 120 marks a full paper.

GRAMMAR—3RD TO 4TH CLASS.

Time, 2½ hours.

Limit of work.—Parts of speech. Inflections. Analysis of simple sentences as far as subject, enlargements of subject, verb, objective complements, adverbial complements. Correction of errors. Definition should always succeed accurate knowledge of the thing defined.

Insist on neat, legible writing. One mark off for every mistake in spelling.

1. What words are understood in the following sentences : (One mark for each word supplied).

- (a) Please lend me your book. [4.]
- (b) He is not so clever as you. [2.]
- (c) John likes me better than him. [2.]
- (d) Kate likes me better than she. [2.]

2. Write the following sentence, introducing the changes required :

I am teaching Charles to add his sum.

Change (a) the subject into the plural.

(b) the verb into the past tense.

(c) " Charles " into the corresponding feminine form.

(d) " his " to suit the change in (c).

(e) sum into the plural. [5].

3. " Who will help me to learn my spelling lesson ? "

(a) What kind of a pronoun is " who " ? Give reason. [0+2.]

(b) Is " will help " transitive or intransitive ? Why ? [0+2.]

(c) Why is " learn " a verb ? [2.]

(d) What part of speech is " spelling " ? Why ? [0+2.]

(e) What is the case of " lesson " ? Why ? [0+2.]

4. Make a table of words in the singular number in one column and the corresponding plurals in another column, using the following words as one of each pair : child, pence, hero, woman, dice, flies, I, he, scarf. [9]

5. " He is too lazy to walk very quickly." Derive the full definition of an adverb from examining its uses in the foregoing sentence. [9.]

6. Parse " ' Come back,' he cried, ' across this stormy water.' " (2½ marks each). [20.]

7. Analyze :

(a) And fast before her father's men.

Three days we fled together. [4.]

(b) His horsemen hard behind us ride. [4.]

(c) Out spoke the hardy Highland wight. [4.]

(d) I'm ready. [3.]

(e) One lovely arm she stretched for aid. [4.]

(f) The loud waves lashed the shore
Return or aid preventing. [5.]

(Two marks for correct division of each sentence into noun-part and verb-part, four marks for correct analysis according to the scheme).

8. Select the correct word from the following pairs, and (optional) give the reason for the selection. (Give two marks extra for each reason correctly assigned.)

Both	she	and George	has	gone
	her		have	went
to school	regularly	this winter.		[8.]
	regular			

(Count 90 marks a full paper.)

CONTEMPORARY LITERATURE.

THE MAGAZINES.

Political Science Quarterly. A review devoted to history, economics and jurisprudence. Edited by the Faculty of Political Science in Columbia College. Published in March, June, September and December. Annual subscription \$3; single numbers, 75 cents. Ginn & Co., Boston, New York and Chicago. The first number of the new magazine promises well : among the most important

articles are " Checks upon the Legislative Power," " The Labour Question," and " The Congo Free State."

Building. A journal of architecture. Published every Saturday at 6 Astor Place, New York. An illustrated paper of special importance to all concerned in building, real estate and the various trades connected therewith.

IN *Littell's Living Age* one is sure to find many attractive articles as well as something

about the topics of the day and a good story or two. Annual subscription, \$8, or along with any of the American monthlies \$10.50.

AMONG the good things in the *May Atlantic* are articles entitled respectively, "Longfellow," and "The Aryan Homestead," also a poem, "The Heart's Call," by Edith M. Thomas.

THE *Overland Monthly* comes early to hand, and contains much that will be read with close attention, especially by those interested in Western affairs.

Our Little Ones (Russell Publishing Co., Boston), is a magazine which is admirably adapted for the inmates of the nursery, and always contains good illustrations.

Lippincott's Magazine, under the new management, is winning its way to a high place in magazine literature. The various departments, especially that of book reviews, are ably conducted, and the articles on various subjects which appear from time to time are of no little value.

Art and Decoration, a monthly devoted to interior and exterior architectural and other decoration, presented in a recent number no less than twenty-two full-page illustrations of great beauty and interest by eminent artists.

THE *Youth's Companion*, Boston, is the oldest paper on this continent published for young people, having been in existence for fifty-eight years. It is a weekly, in quarto form, fresh and wholesome, not sensational nor wholly devoted to stories.

THE *Sunday School Times*, of Philadelphia, with its able staff of writers and contributors continues to provide good things of the highest order for its readers.

Harper's Weekly maintains its place among the very best illustrated papers on this continent. Its political utterances are such as to foster independent, honest opinions on matters of public interest.

Harper's Monthly for May. There is an article here for the lover of nature in Mr. Gibson's "Sap Bewitched," another for the soldier in "With the Bluecoats on the Border." Mr. W. H. Ingersoll's "Portraits of the Saviour," and its illustrations, will

be studied with reverent attention; while the "London Season," and the serials will please the most fastidious.

SELECTIONS FROM LATIN AUTHORS. By E. T. Tomlinson, Head Master of Rutgers' College Grammar School, New Jersey. Boston: Ginn & Co.

A book that will be examined with pleasure by classical scholars. The selections are intended for sight-reading, and are admirably adapted for that purpose.

THE CHOICE OF BOOKS, and other Literary Pieces. By Frederick Harrison. London and New York: Macmillan & Co., 1886. Toronto: R. W. Douglas & Co. Paper, 50 cents.

Mr. Harrison's lectures and essays, as the literary world has known for twenty years and more, are pleasant, cheerful, friendly reading, if one may be allowed the expression. About one-third of the present book is new; five of the numbers are lectures delivered before popular audiences, and the remainder have been published in the English magazines and reviews, from which they have been frequently reprinted. Mr. Harrison's style is attractive, with a sparkle that reminds one of Macaulay.

WHAT DOES HISTORY TEACH. By John Stuart Blackie. New York: Charles Scribner's Sons, 1886. pp. 123. 75c.

Professor Blackie's latest contribution to literature consists of two lectures entitled respectively, "The State," and "The Church," which were delivered before the Philosophical Institution of Edinburgh a few months ago. In his own strong and trenchant, yet kindly, style, he deals briefly and suggestively, rather than exhaustively, with the great problems of the ages, *e.g.*, "A republic in an over-civilized, highly-centralized, bureaucratic-governed country (France), with a religiously-hollow, hasty, violent, excitable and explosive people, seems of all social experiments the least hopeful, and that is all that can wisely be said of it at present." We wish that space did not forbid

our quoting an eloquent sentence about American vs. English forms of government (and of wickedness), and yet another about the "windy artillery" which assails the Church of God. We can only hope that many of our readers will see them for themselves.

WORDS AND THEIR USES: A Study of the English Language. By Richard Grant White. School edition. Cambridge: The Riverside Press. Boston and New York: Houghton, Mifflin & Co. Toronto: Williamson & Co. pp. 467. \$1.

This work was first issued fifteen years ago and has gained an important place for itself, having been of service to teachers, and indeed to all who are interested in the study of our mother-tongue. The author's intimate acquaintance with English classics and his cultivated taste are displayed on every page, and not infrequently opposition is disarmed by some witty thrust or happy illustration. "Newspaper English," "British English and 'American' English," "Words that are not words," "Big words for small thoughts," "Shall and will," "Style," so run some of the chapter headings.

SCOTT'S MARMION. With Notes. By F. S. Arnold, M.A., of Bedford Grammar School and King's College, Cambridge. Rivingtons, Waterloo Place, London, 1886. 374 pp.

We pity any one who does not read with enthusiasm the best poem of Sir Walter Scott, "the buoyant, virtuous and happy genius exulting in its own energies, yet possessed and mastered by a clear, calm, modest mind, and happy only in diffusing happiness round it." We need offer no extended remarks on the present edition. We hope our readers will not think us unduly dogmatic in expressing the opinion that it is the very best school edition yet issued.

GRAMMAR AND COMPOSITION FOR COMMON SCHOOLS. By Prof. Lyte, of the State Normal School, Pa. New York: D. Appleton & Company, 1886. 270 pp.

This book is carefully written and arranged, special attention being given to definitions and the more obscure grammatical forms. The part devoted to composition is good, as

also an appendix on "Rules of Construction." It is almost amusing to see the Potential Mood (!) still recognized.

I. INDEXING AND PRECIS-WRITING. pp. 224. 3s.

II. DIGEST OF RETURNS. pp. 74. 2s.
By William Russell, War Office, Civil Service Tutor. London: W. Stewart & Co.

The above-mentioned work on this subject is clear, logical and complete, dealing with the ground in an able and thorough manner. In a word, intending candidates will find that they are shown exactly how to do what is required.

The "Digest of Returns" is well arranged, and the exercises and specimens worked out are quite as valuable as in the "indexing." Those who are preparing for Civil Service examinations, or intend devoting themselves to commercial pursuits, will find these books of great service.

ELECTRICITY. By Linnæus Cumming, of Trinity College, Cambridge and Rugby School. London: Rivingtons, Waterloo Place, 1886. pp. 389.

In this work, which is the substance of lectures given to the senior boys in Rugby School, but which certainly goes far beyond a mere popular knowledge of the subject, electricity is treated experimentally rather than theoretically. The sixteen chapters are divided into four books, entitled respectively, "Magnetism," "Frictional Electricity," "Voltaic Electricity," "Thermo-Electricity," and the work is worthy of a place in every school library, not only on account of the importance of the subject, but also for its own merit.

FOREIGN SCHOOL CLASSICS. Charles XII.—par Voltaire. G. Eugene Fasnacht.

The series of Foreign School Classics would have been incomplete without Voltaire's brilliant biography. The present edition is specially valuable for the notes which contain corrections of historical inaccuracies as well as explanations of grammatical and other points.

NOTES.

THE Sauveur Summer School of Language, of which our readers will find an account in our advertising columns, has been removed from Vermont to Oswego, N.Y. It has been established for ten years, and enjoys a well-deserved popularity.

A THIRD edition of Fulton & Trueblood's Choice Readings, reviewed some time since in our columns, has recently been issued. There are few books of the kind so free from objectionable features, and so suitable for use in the class-room.

It is to be regretted that the otherwise usefully suggestive book by Dr. J. G. Hodgins on School Architecture and Hygiene, contains not even the "shadow of a whisper" about teachers' residences. The school law empowers trustees to erect dwelling houses for teachers; and a portion of the work might have been profitably employed to advocate a move in this direction.

MR. JAMES WHITMAN, B.A., the author of the excellent article on the "Canadian Pacific Railway," which appeared in the April MONTHLY, is a barrister-at-law, of

Halifax, Nova Scotia, and has written several other articles and essays of merit; as well as a poem on "Canada," which was published in Halifax, and dedicated, by permission, to Lord Dufferin.

THE official book-crop is expected to turn out well this season. The new Fifth Reader is promised for the fall. A geography is in course of preparation by a city firm. One already completed awaits the royal sanction. Somebody is getting up a grammar, and some other body has on the stocks a book of methods. A "Companion to the Fourth Book" has just come out, and it is not improbable that we shall have a Coadjutor to the Fifth Reader before this time next year. It will also be in order for some one to produce a Key to the New Grammar, Clues to the New Geography, and Aids to the Understanding of the New Book on Methods.

Perhaps the lawyer who prepared the book of Scripture Readings will now give us a little Concordance to explain the relations of disconnected passages, the harmony of apparent contradictions, and the true inwardness of mutilated narratives in his compendium.

BUSINESS.

If you know your subscription to have expired, renew it at once. \$1 per annum is the subscription price, and there is not a teacher in Canada who cannot afford to pay that sum for a good educational paper.

Notify THE MONTHLY at once of change of post office, always giving the name of old office as well as the new.

THE MONTHLY will not be discontinued to responsible subscribers until ordered to be stopped. Bills will be rendered from time to time, and prompt payment of the same will be expected.

Subscribers wishing to introduce THE MONTHLY to their friends can have speci-

men copies sent free from this office to any address.

Our readers will observe that special attention is given to examination papers in this Magazine; in many cases hints and answers are given, and for several papers solutions have been furnished to all the questions. We hope subscribers and others will show in a practical way their intelligent appreciation of the valuable work done by the editors of the different departments of THE MONTHLY.

Bound copies of this Magazine in cloth can be had from Williamson & Co., King Street West, Toronto, for \$1.50 per copy.